



PRIVATE CLIENT GROUP



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Private Client Group Economic Update – Markets & Macro

March 2025

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A Closer Look at the U.S. Economy

S&P 500 correction blamed partly on Trumpian uncertainty

S&P 500 Suffers Correction

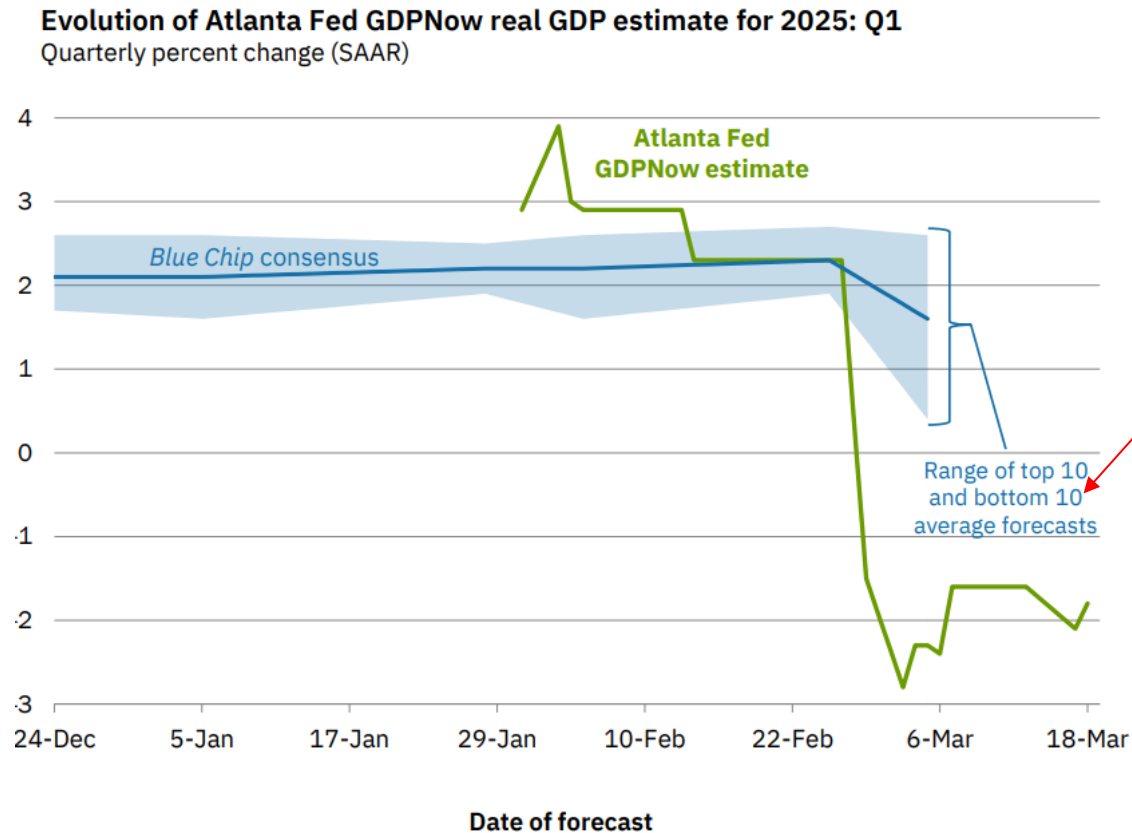
- On March 13, the S&P 500 closed down more than 10% since its all-time high set on Feb. 19 – meeting the definition of a correction. The total return of the index is down 5.9% YTD through March 13, after rising 25.0% last year.
- Many market watchers believe the main cause of the recent decline in stock prices is uncertainty over the impact of Trump tariffs, which have sometimes been announced one day and cancelled the next. However, there are other factors at play.
- Some stock strategists have been arguing for months that equity valuations were quite high compared to historical averages, and a reversion to the mean, in the form of a correction, was to be expected sooner or later.
- Moreover, some forecasts of recession probabilities jumped sharply in the past month. A closely watched quantitative GDP forecasting model, the Atlanta Fed's GDPNow, suffered a sharp dropoff in its estimate of Q1 GDP, which is now negative.

Sudden Increase in Recession Probability

- After an upsurge in inflation and a downturn in the U.S. stock market, **the probability of a recession within six months to a year has significantly increased.** Our proprietary model, which forecasts the probability of a recession six months from now, shows a 10% chance now vs. a 2% chance just two weeks ago.
- Bloomberg's forecasting model predicts a 25%-20% chance of a recession, up from 10% at the beginning of the year.
- Bloomberg's SHOK model also predicts a significant hit to GDP in the second half of the year from tariff costs and DOGE spending cuts and layoffs.
- JPMorgan Chase's chief economist puts the recession likelihood at 40%.
- The Atlanta Fed's GDPNow model, which forecasts only the upcoming quarter, is based on recent economic reports. On March 6 it forecast -2.4% GDP annualized for Q1, down almost five percentage points from three weeks ago. A recession is two straight quarters of negative GDP growth.

The Atlanta Fed's GDPNow Tool Forecasts -1.8% for Q1 2025 U.S. GDP

The forecast is quantitative, based on recent economic reports. Note that the quant estimate plunged while the consensus of human forecasters has remained positive (-2.4% quant vs. +2.0% human). Q4 GDP was +2.3%% annualized.



**-1.8% annualized est.
Q1 GDP (March 18)**

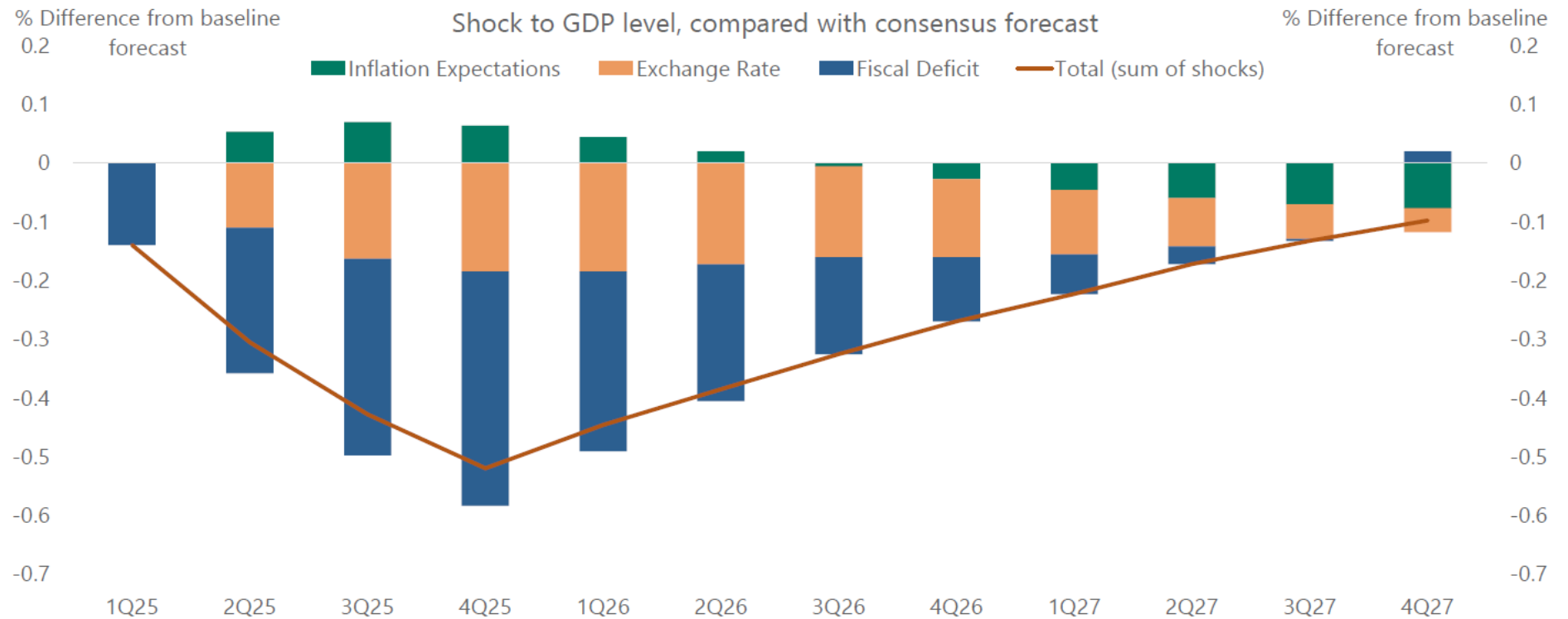
Sources: Blue Chip Economic Indicators and Blue Chip Financial Forecasts

Note: The top (bottom) 10 average forecast is an average of the highest (lowest) 10 forecasts in the Blue Chip survey.

Source: U.S. Bureau of Economic Analysis data.



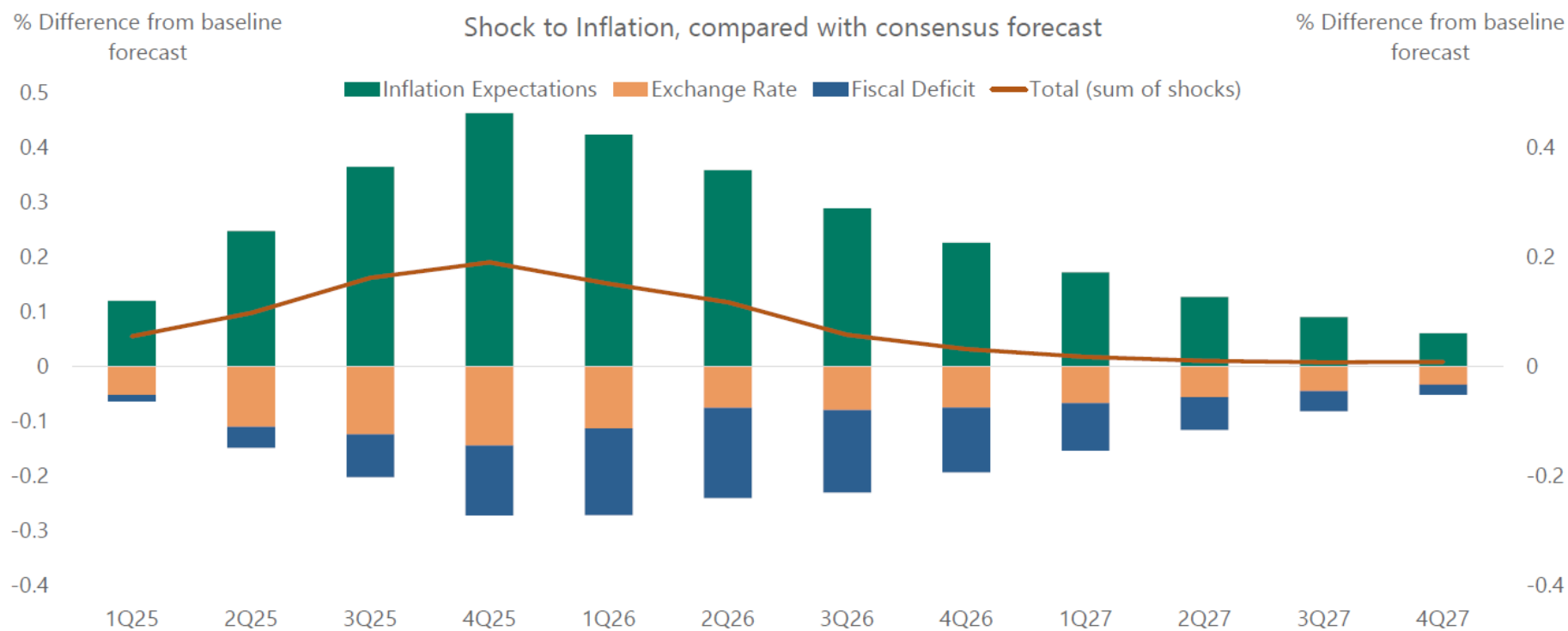
The impact of tariffs and DOGE on GDP



Source: Bloomberg SHOK model, Apollo Chief Economist. Note: Assumptions: \$100bn in DOGE savings resulting in 0.4% reduction in fiscal deficit, 5% appreciation of exchange rate and 0.5% - pt increase in inflation expectations shocks applied in Q1 2025.



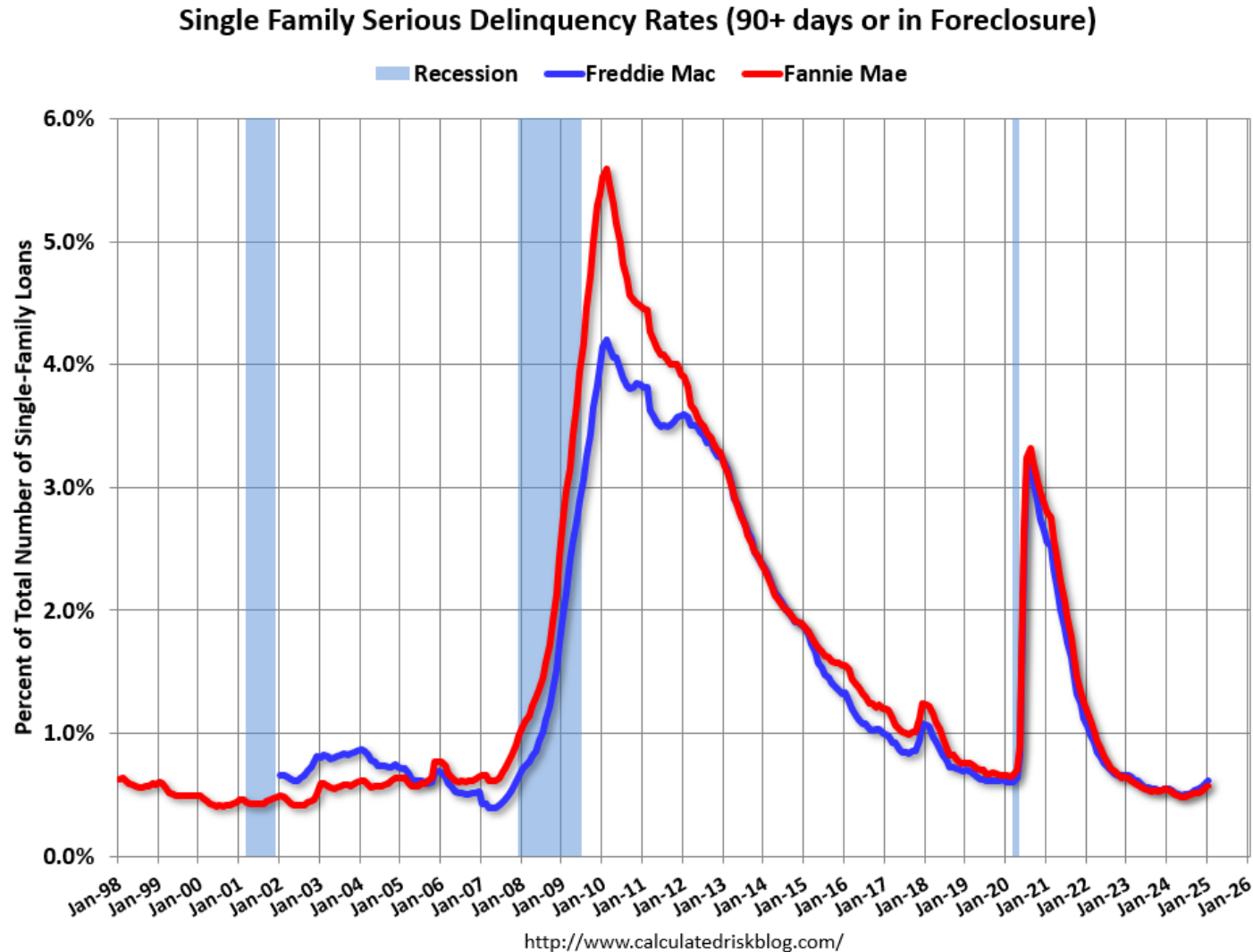
The impact of tariffs and DOGE on inflation



Source: Bloomberg SHOK model, Apollo Chief Economist. Note: Assumptions: \$100bn in DOGE savings resulting in 0.4% reduction in fiscal deficit, 5% appreciation of exchange rate and 0.5% - pt increase in inflation expectations shocks applied in Q1 2025.

U.S. Economy: Home Mortgage Delinquencies

According to Freddie Mac, the single family serious delinquency rate (home mortgage defaults) is on a slight upswing, after falling ever since the pandemic. The current rate of 0.61% is slightly higher than the pre-pandemic rate.



Source: Freddie Mac.

Highlights/Lowlights

- The latest consumer inflation report (CPI) was better than expected. Currently, the expectation based on Fed funds futures prices is for another 25 bps interest rate cut no later than the Fed's mid-June policy meeting (CME FedWatch forecasting tool, March 14).
- The CME FedWatch tool indicates at least two 25-bps rate cuts by year end, with an 80% probability. The probability of three rate cuts is about 30%, and four cuts, 15%. This is a reset of recent expectations for a slower pace of rate cuts and presumably reflects the increasing prospect of recession.
- The benchmark 10-year Treasury yield has lost 30 bps so far this year and stood at 4.27% on March 13. The 2-year yield has also lost 30 bps and is at 3.94%.
- Headline inflation (CPI-U) rose 0.2% in February vs. a disturbing +0.5% in January. The 12-month trailing rate is now 2.8%, down from +3.0% in January. Core CPI, leaving out volatile food and energy prices, rose 0.2% and stands at +3.1% over the last year.
- In February, the shelter component of CPI was responsible for half of the monthly increase. The price of gasoline fell 1.0%, and the cost of the energy component is -0.2% over the last year. The price of food, much in the news lately especially because bird flu sent the price of eggs soaring, is actually up only 2.6% over the past year, less than the overall inflation rate.

Highlights/Lowlights

- Over the last two weeks, tariffs changes have come in a confusing cascade, changing day-to-day.
- As March began, the one-month pause President Trump announced before imposing tariffs on Canada and Mexico came to an end. Hopes for a last-minute deal with either country were in vain, and the 25% rate on imports from both countries went into effect on Mar. 4. Both countries announced plans for retaliatory tariffs. Trump also doubled the tariff rate on Chinese imports. It went from 10% imposed a month ago to 20%, also on Mar. 4. Beijing announced it would impose additional tariffs of up to 15% on some U.S. goods, starting Mar. 10, and restrict exports to 15 U.S. companies.
- U.S. stocks slumped on Mar. 3 as news emerged that there would be no last-minute deals. The S&P 500 lost about 2% and the Nasdaq Composite 2.6%. Stocks in the rest of the world also fell. Sentiment since then has been mostly negative.

Highlights/Lowlights

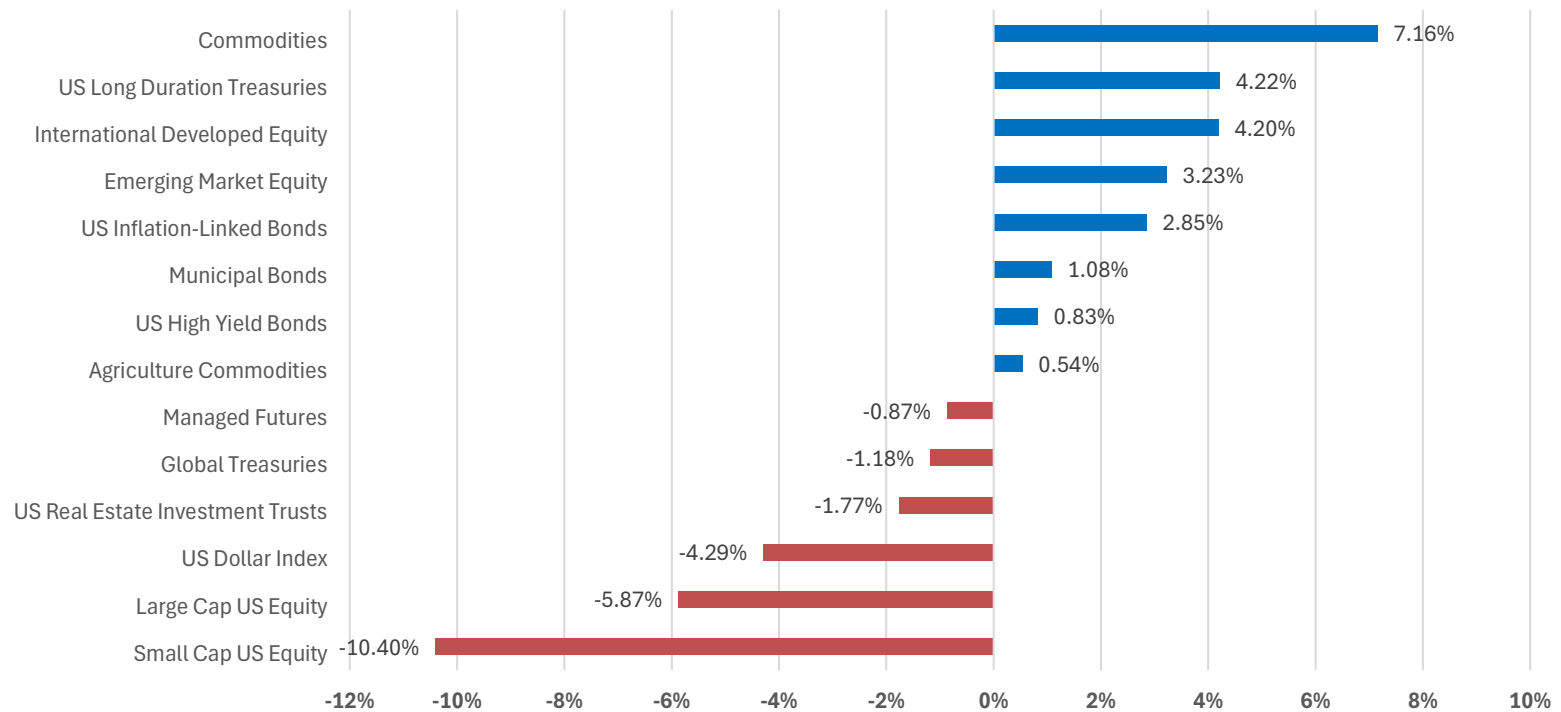
- The CBOE VIX, the so-called “fear index” which tracks the volatility of S&P 500 futures, had been bound in a range of 14-20 since the beginning of the year, fairly low relative to the long-term average. But it spiked higher to around 25 on the early-March tariff news, and has stayed around that level.
- Stocks outside the U.S. (iShares MSCI ACWI ex-US ETF) rose in both January and February and were up 6.1% YTD through Feb. 28. For full year 2024, they had a 5.2% gain, significantly underperforming U.S. markets.
- Emerging markets overcame late 2024’s headwinds, with the iShares MSCI Emerging Markets ETF up 3.3% YTD through Feb. 28.
- The first read of Q4 2024 U.S. GDP was +2.3% annualized. Robust consumer spending compensated for a downturn in investment compared to the previous quarter when GDP rose 3.1% annualized. The trade balance (imports & exports) had little effect on GDP.
- Other U.S. economic reports have been mixed. Factory orders plunged 0.8% in December and 0.9% in January, after a strong November performance. A major cause of the decline was plunging non-defense aircraft orders. Airlines worldwide are pausing new orders from Boeing as it works through a daunting list of quality problems with its 737 MAX and 787 models.

Highlights/Lowlights

- Durable goods orders were up 3.1% month-over-month in January, and nondefense capital goods orders ex-aircraft—a proxy for business investment—rose +0.8%.
- The February jobs report was so-so, with 141,000 new jobs added, little changed from January. Headline unemployment remained at 4.1%.
- Average hourly earnings rose a bit in February to \$35.93. They're up 4.0% over the past year, significantly higher than the rate of headline inflation.
- The residential housing market is sputtering as lower interest rates have mostly not translated to lower mortgage rates, according to the National Assn. of Realtors®. Existing home sales were down 4.9% month-over-month in January, but +2.0% year-over year.
- January new home sales fell 10.5% month-over-month and were 1.0% less than a year ago. The average sale price of a new home is now \$510,000.

YTD Performance has turned negative for US Equities, while Int'l/EM Equities, Commodities, and US Treasuries remain positive as of 3/13/25.

2025 YTD Asset Class Average Performance



* Returns are not annualized.

Asset Class Average Returns

Large Cap US Equity : S&P 500 Total Return Index
Small Cap US Equity : Russell 2000 Total Return Index
International Developed Equity : MSCI EAFE USD Hedged Net Total Return
Emerging Market Equity : MSCI Daily TR Gross Emerging Markets USD Index
US Long Duration Treasuries : Citigroup United States GBI 10+ Year Total Return Index
Global Treasuries : Citigroup Non USD WGBI USD Hedged Index
Managed Futures : Credit Suisse AllHedge Managed Futures Index
Municipal Bond : Barclays Municipal Bond 5 Year Total Return

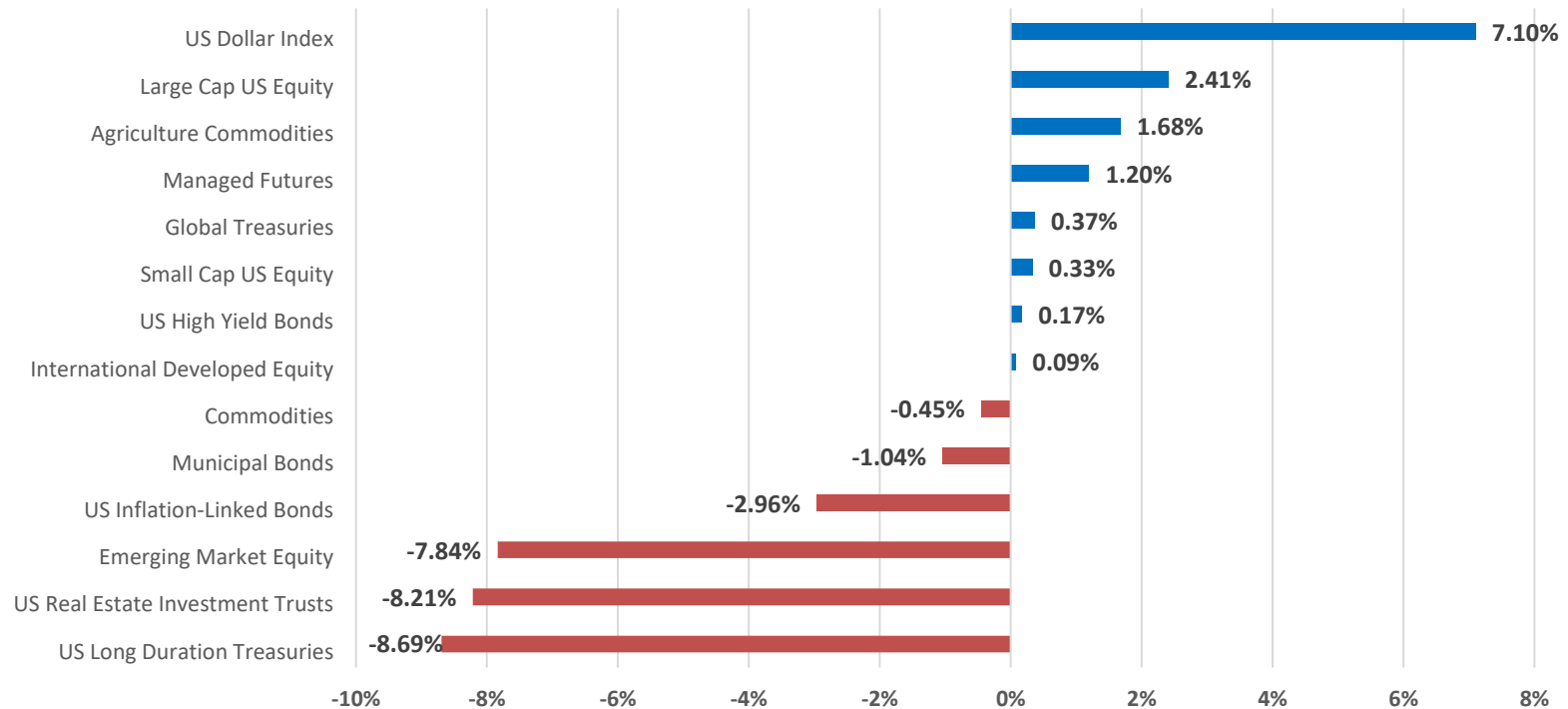
Asset Class Average Returns

US Inflation-Linked Bonds : Barclays US Inflation Linked Bonds Total Return Index
US High Yield Bonds : Barclays US Corporate High Yield Total Returns Index
Commodities : Bloomberg Commodity Total Return Index
US Real Estate Investment Trusts : Dow Jones US REIT Index
US Dollar Index : DXY US Dollar Index
Agricultural Commodities : S&P GSCI Agricultural Index Total Return

2024 Q4 Markets in Review

Q4 US Dollar led performance, while REITs, EM Markets, Long Duration Treasuries were the Lead Detractors.

Q4 2024 Asset Class Average Performance



* Returns are not annualized.

Asset Class Average Returns

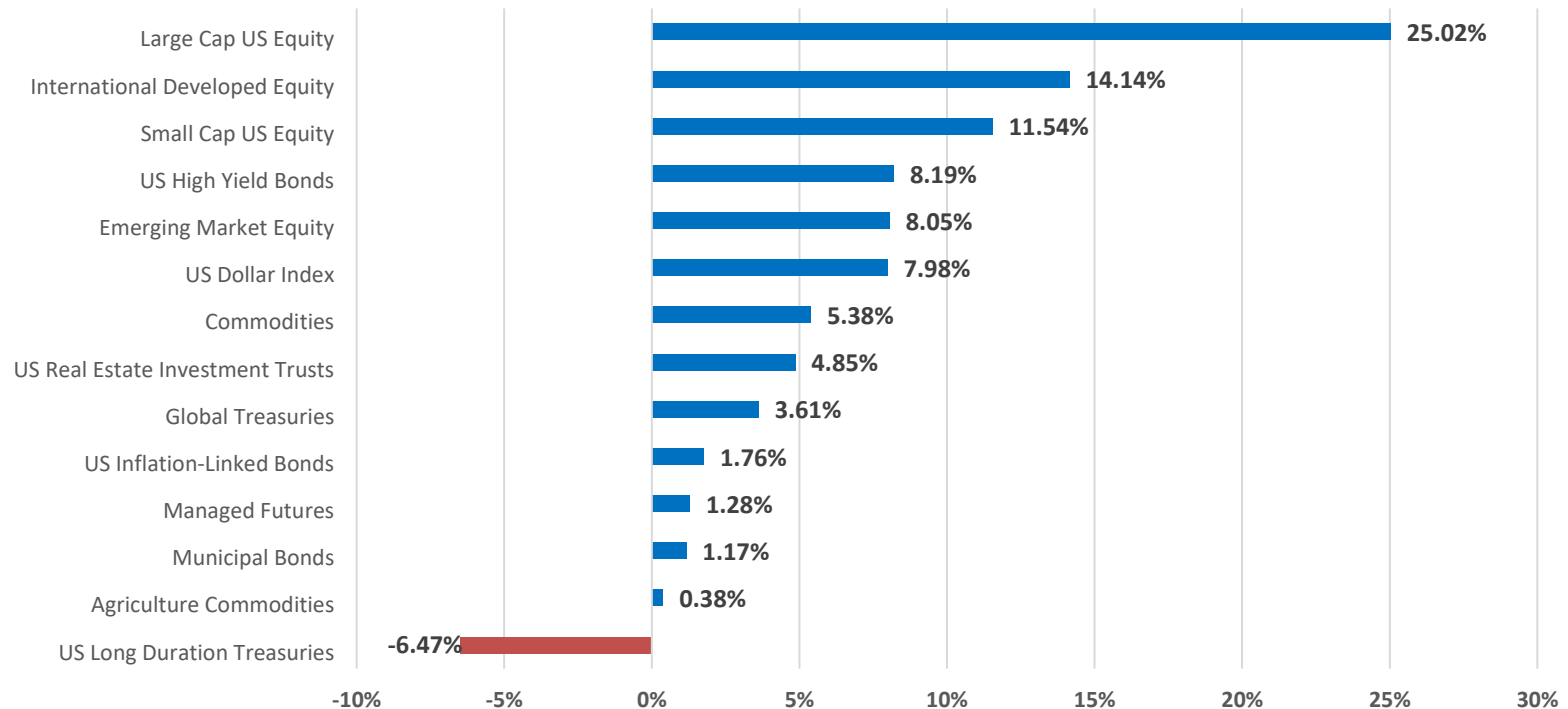
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US Large Cap Equities Were the Top-Performing Asset Class in 2024

YTD 2024 Asset Class Average Performance



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Large Cap US Equity : S&P 500 Total Return Index
Small Cap US Equity : Russell 2000 Total Return Index
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Asset Class Average Returns

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Just What is a Tariff?

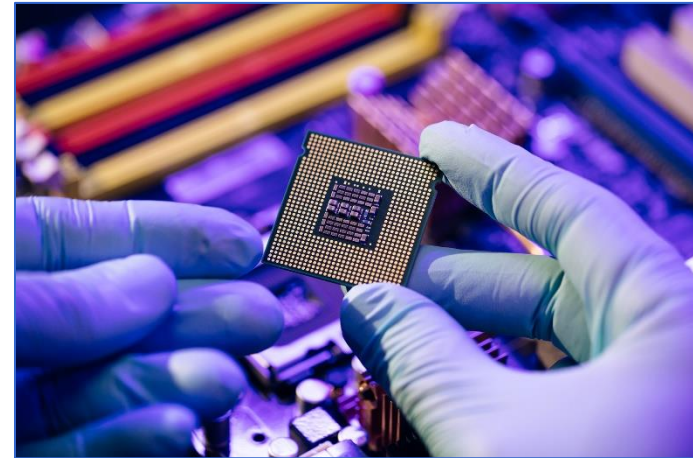
- What's a tariff? Put simply, it's a tax on imported or exported goods. The exporting entity pays the tariff to the country doing the importing. The entity doing the importing will usually have to pay a higher price for the import, to reflect the cost of the tariff.
- The purposes of tariffs, which are a type of customs duty, are to protect domestic industries, achieve foreign policy goals, and/or raise revenues. Before the creation of the Federal income tax in 1913, except for a brief period during the Civil War, the main source of U.S. Federal revenue was customs duties and tariffs.
- A tariff can be applied to all imports, all imports from a particular country, some imports in defined categories (e.g., autos or oil), or apply to some imports which exceed certain levels. A big issue with tariffs especially in the present day, is anomalies when goods cross borders more than once during the production process, as auto components often do. A well-designed tariff gets applied to a particular import only once.
- In 1930, Congress passed the draconian Smoot-Hawley tariff law, which raised U.S. import duties 40-60%. It's often cited as a cause of the global Great Depression, though most economic historians believe it wasn't the only cause.

What's Affected?

Sectors/Industries Most Likely to Be Affected



Autos (there's already a 25% tariff on light trucks)



Semiconductor chips



Petroleum



Consumer goods

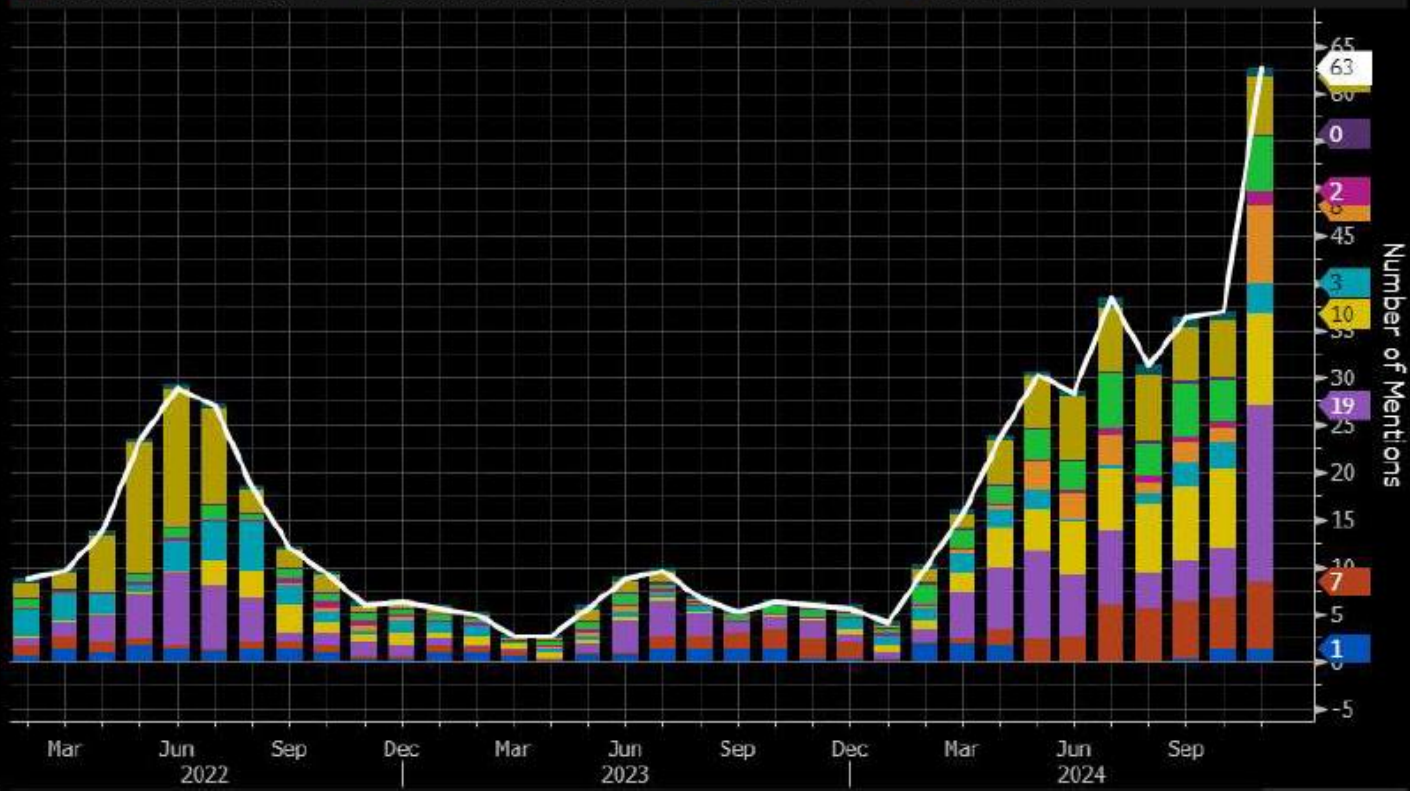
Tariffs anxieties

AI-Identified Mentions of Tariffs in S&P 500 Transcripts (3M MA)

Total

Bloomberg DS AI-Powered Topic

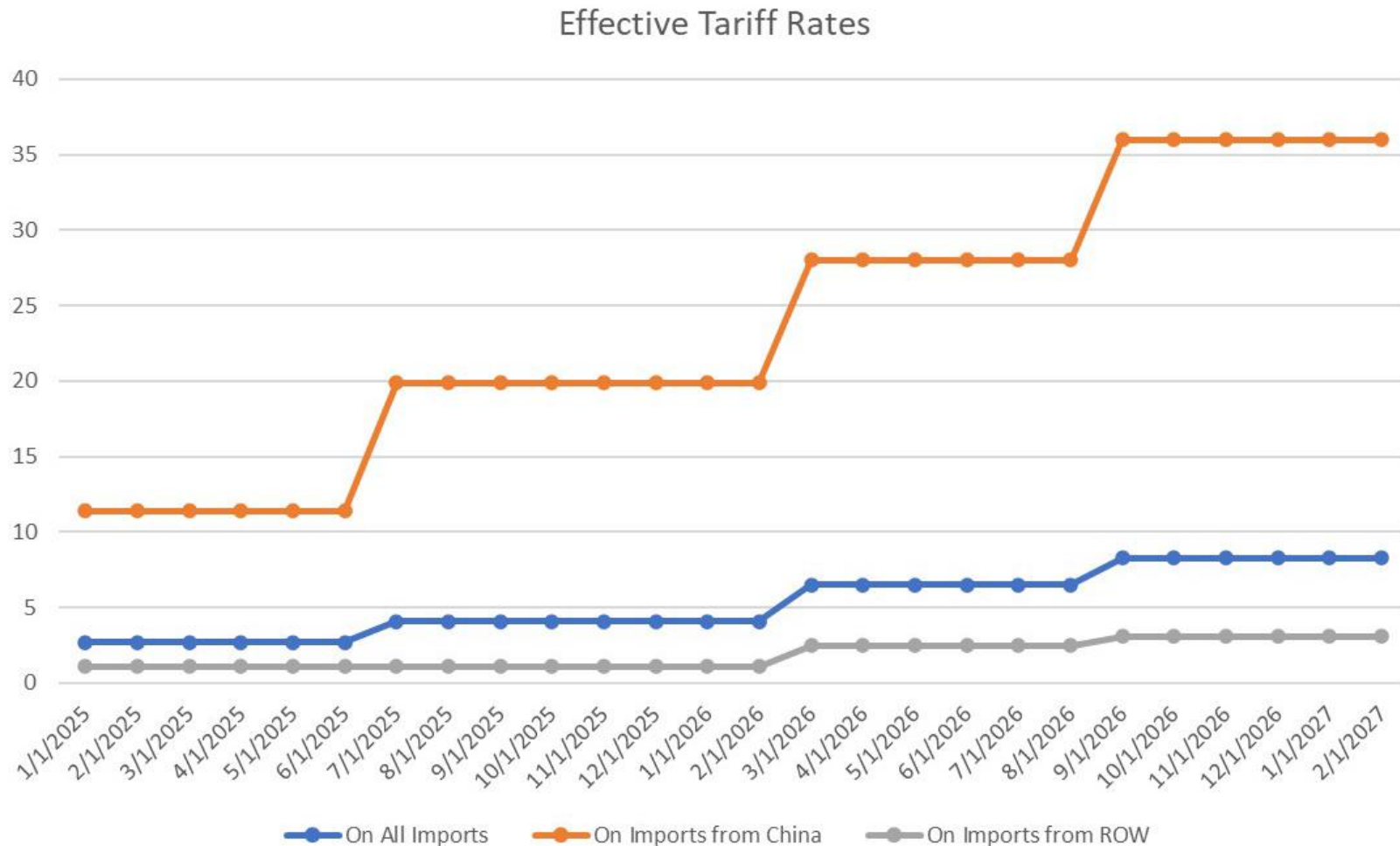
Total	63	Energy	1	Materials	7	Industrials	19
Consumer Discretionary	10	Consumer Staples	3	Health Care	8	Financials	2
Information Technology	6	Communication Services	0	Utilities	6	Real Estate	1



Source: Bloomberg Chief U.S. Economist (Jan. 16, 2025).

In the latest cycle of S&P 500 earnings calls, tariffs were mentioned by a sharply increased number of companies

Tariffs: Impact on Business & the Economy

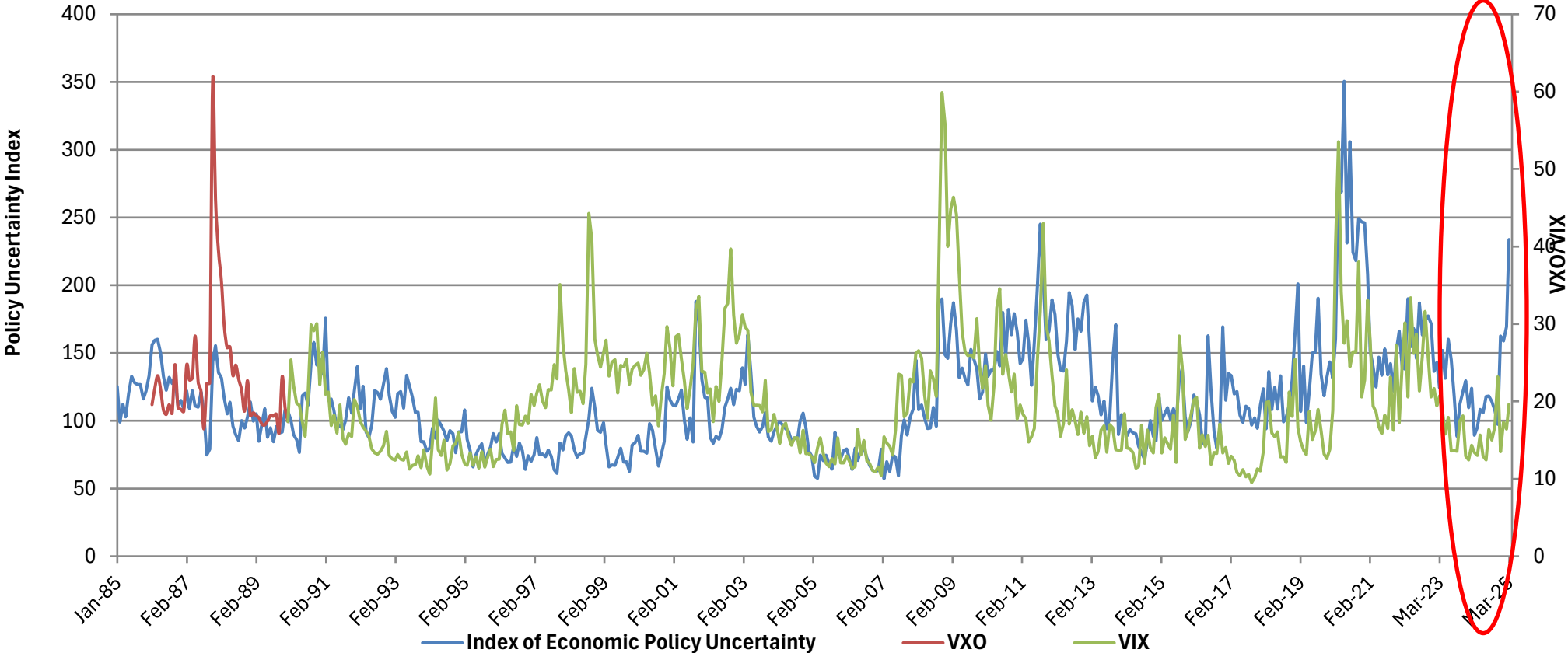


Source: Bloomberg Chief U.S. Economist (Jan. 16, 2025).

Bloomberg recently modeled what a full-blown trade war with China would look like. They forecast a 36% tariff rate on China by the end of next year. This would raise \$250 billion in revenue. (Economic costs are harder to model.) Average tariff rates on other countries are forecast much lower (3-4%).



Policy Uncertainty and Volatility January 1985 – February 2025



Notes: Index of Policy-Related Economic Uncertainty composed of 4 series: monthly news articles containing uncertain or uncertainty, economic or economy, and policy relevant terms (scaled by the smoothed number of articles containing 'today'); the number of tax laws expiring in coming years, and a composite of interquartile ranges for quarterly forecasts of federal, state, and local government expenditures and 1-year CPI from the Phil. Fed Survey of Forecasters. Weights: 1/2 News-based, 1/6 tax expirations, 1/6 CPI disagreement, 1/6 expenditures disagreement after each index normalized to have a standard-deviation of 1. News query run Jun 4, 2011. Index normalized mean 100 from 1985-2009. Data at www.policyuncertainty.com

Source: FRED
As of March 13, 2025

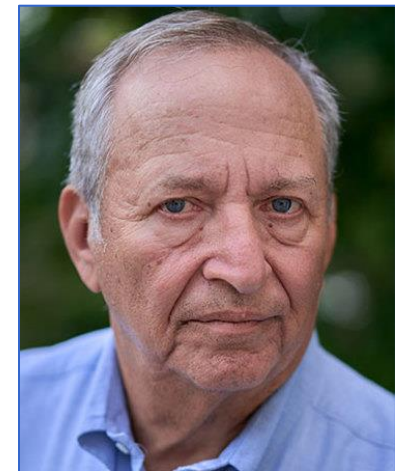
- Trump's tariff crusade has little support among business leaders and economic policymakers, including Republican heavies. The *Wall Street Journal* has editorialized against the tariffs, drawing Trump's ire. GOP elder statesman on economics, former Senator Phil Gramm, joined with the Democrats' elder statesman, former Treasury Secretary Larry Summers, for an op-ed calling the trade strategy foolish.

“While we have fundamental differences in our views of how to produce a sound fiscal policy and implement effective incentives for productive efforts, we are united in our belief that broad-based tariffs will impede economic growth, risk triggering a trade war, and inflict long-term harm on the economy.”



Gramm

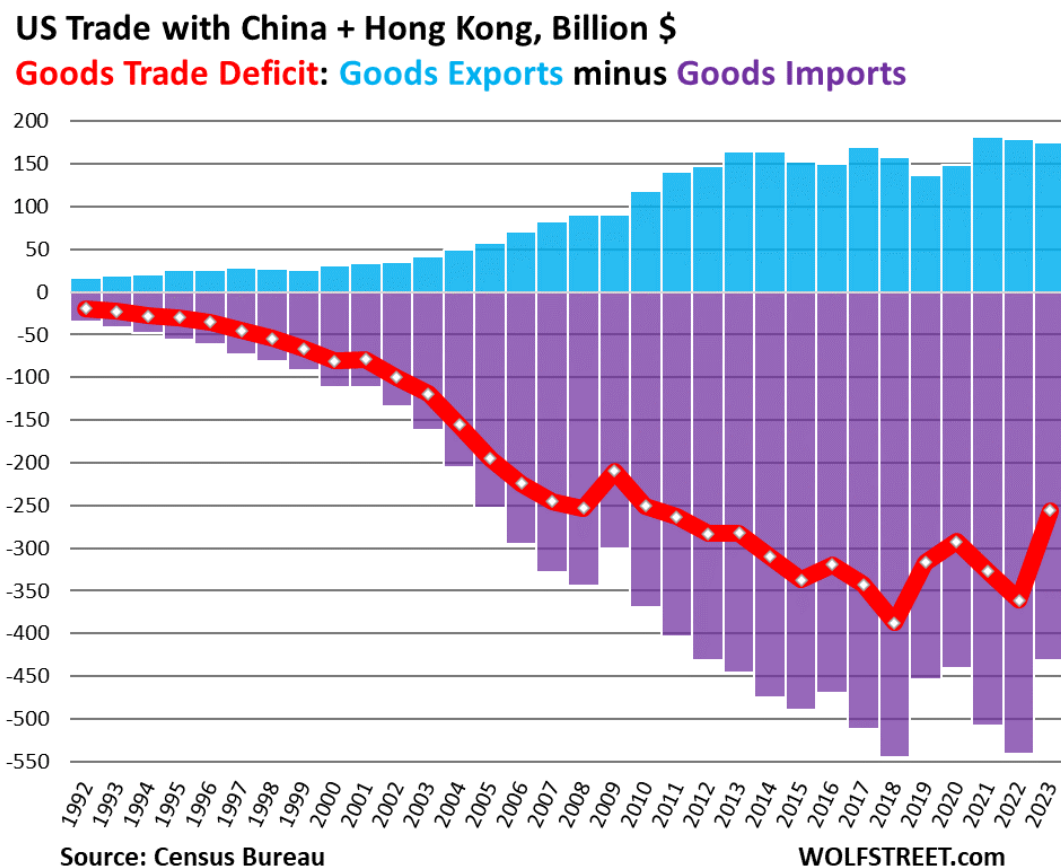
—“Gramm and Summers: A Letter on Tariffs From Economists to Trump,”
Wall Street Journal, Jan. 30.



Summers

The Promise (or Peril) of Tariffs

- According to economist Noah Smith, the U.S. runs the world's biggest trade deficit while China runs the largest surplus, with the rest of the world more or less in balance:



The U.S. trade deficit is primarily with China

The Promise (or Peril) of Tariffs

- The reduction of U.S. exports which would follow other countries' retaliation against high U.S. tariffs would be exacerbated by high tariffs' macro effects which include a strengthening of the U.S. dollar. Relatively strong today, the dollar would likely get even stronger as the new global tariff regime kicks in. A strong dollar sounds good and is good if you're an American travelling abroad. But it also reduces exports by making them more expensive. High tariffs could increase the trade deficit if exports decrease more than imports, that is, if the elasticity of demand turns out to be greater for exports than imports. And it might be expensive to find out if the rest of the world can do without U.S. semiconductors while drinkers here can't give up imported Scotch.
- During the first Trump Administration, the U.S. imposed tariffs on \$200 billion worth of Chinese goods, as retaliation for China's theft of U.S. intellectual property. The tariffs caused significant harm to the Chinese economy and China threw in the towel with a 2020 agreement to stop stealing. (The effect of this is uncertain, because the U.S. also stepped up attempts to catch IP thieves.) The Federal Reserve Board found that the tariffs reduced U.S. manufacturing employment by 1.4%, while Oxford Economics found the trade war reduced GDP by 0.5 percentage points and cost 245,000 jobs. If tariffs serve as bargaining chips in the same manner, they might not actually be put in place or may be rescinded at some future point.

Shifting Gears ...

What's All This About Bear Markets & Bubbles?

- In October, Goldman Sachs' equity strategy team predicted a 3% annualized return for the S&P 500 over the next 10 years.
- The last 10 years' annualized return is 13% per year. The average annualized return since the index took its current form in 1957 is 10.5%.
- Goldman's long-term forecast is not the only pessimistic sell-side take, but this forecast received more attention than others perhaps because Goldman gave an absolute number rather than a range. By comparison, Vanguard equity research predicts 2.8% to 4.8% annualized over 10 years. Goldman says the average return prediction is 6% annualized.
- Goldman warned that recent returns have been driven by a small number of stocks, referred to as 'the Magnificent Seven' tech superstars.
- However, the basis of Goldman's forecast is the very high level, compared to historical norms, of the CAPE or Shiller 10-year P/E ratio. The current level of 38 is in the 97th percentile of historical readings.

Goldman Goes Bearish on the S&P 500

- Goldman's model predicts a 72% probability that stocks will underperform bonds over the next decade.
- Taking such forecasts as Goldman's at face value has huge implications for economic growth, returns expectations of endowment-like funds such as pension plans, economic growth and national politics, and not least, the trajectory of advice financial advisers give to their clients.



Destruction by Thomas Cole (1833-1836)

Economists' Forecasts of Stock Market Returns Have a Dismal Track Record (... Analysts' Estimates Are Even Worse!)

- Even during a period of dramatic run up in the market (and in subprime assets), were analysts unbiased?
- No!
- **For bottom-up or top-down earnings estimates, the results have been the same**

Year*	Analysts	Economists	Actual
1982	26.16%	5.27%	-17.84%
1983	32.17%	24.72%	11.41%
1984	34.18%	27.67%	18.35%
1985	10.76%	12.86%	-12.20%
1986	22.77%	22.86%	-0.89%
1987	32.62%	18.78%	20.86%
1988	29.76%	14.51%	35.77%
1989	10.46%	4.42%	-3.75%
1990	13.79%	12.02%	-6.69%
1991	1.88%	6.70%	-25.16%
1992	37.98%	48.65%	19.54%
1993	22.77%	36.35%	14.98%
1994	38.90%	28.61%	39.45%
1995	10.91%	4.77%	10.91%
1996	18.19%	11.69%	14.08%
1997	13.68%	5.16%	2.56%
1998	14.68%	13.75%	-5.06%
1999	28.50%	14.77%	27.98%
2000	8.07%	7.34%	3.61%
2001	16.91%	19.26%	-50.62%
2002	56.81%	49.86%	14.70%
2003	44.02%	39.48%	72.25%
2004	19.16%	10.46%	20.03%
2005	8.23%	11.10%	19.44%
2006	-1.96%	-0.40%	16.56%
2007	-5.88%	12.87%	-18.81%
2008	7.22%	45.06%	-77.52%
Average	20.47%	18.84%	5.33%

Average annual percentage error			
Average annual percentage error 1982-2008	284%	253%	

*Estimates made in January each year.

Source: Dreman Value Management from IBES international data.

Bubbles are often referenced when investors think about the dangers of investing because eventually, while dramatic valuation increases may occur in “bubble assets,” bubbles are said to burst. Concerns about such experiences have been memorized in more than a hundred episodes in financial market history (see Kindleberger and Aliber’s book, *Manias, Panics and Crashes*).

Phases of a Financial Crisis according to Kindleberger and Aliber:

- **Displacement:** A shock or innovation (e.g., new technology, policy change) alters economic expectations and creates profit opportunities.
- **Boom (Mania):** Excessive speculation and rapid price increases in assets. Credit expansion often fuels the mania.
- **Distress:** Doubts emerge about the sustainability of prices, triggering unease among investors.
- **Panic:** Rapid sell-offs occur as investors rush to exit positions. Liquidity dries up, exacerbating the crisis.
- **Crash:** Prices collapse, often overshooting the fundamental value.

Kindleberger and Aliber highlight the role of credit bubbles. It may magnify the bubble. Speculative borrowing may induce greater instability. And periods of stability may actually give rise to behavior that creates instability.

(Potential) **historical examples** of supposed speculative bubbles and crises

- **Tulip Mania (1637)**: Speculative bubble in tulips in the Netherlands.
- **South Sea Bubble (1720)**: British stock market collapse driven by speculative investment.
- **Great Depression (1929)**: Massive speculative stock market boom followed by the largest economic downturn in modern history.
- **Dot-Com Bubble (1990s)**: Internet stock prices soared beyond fundamentals before collapsing.
- **Global Financial Crisis (2008)**: Subprime mortgage crisis led to systemic banking failures.

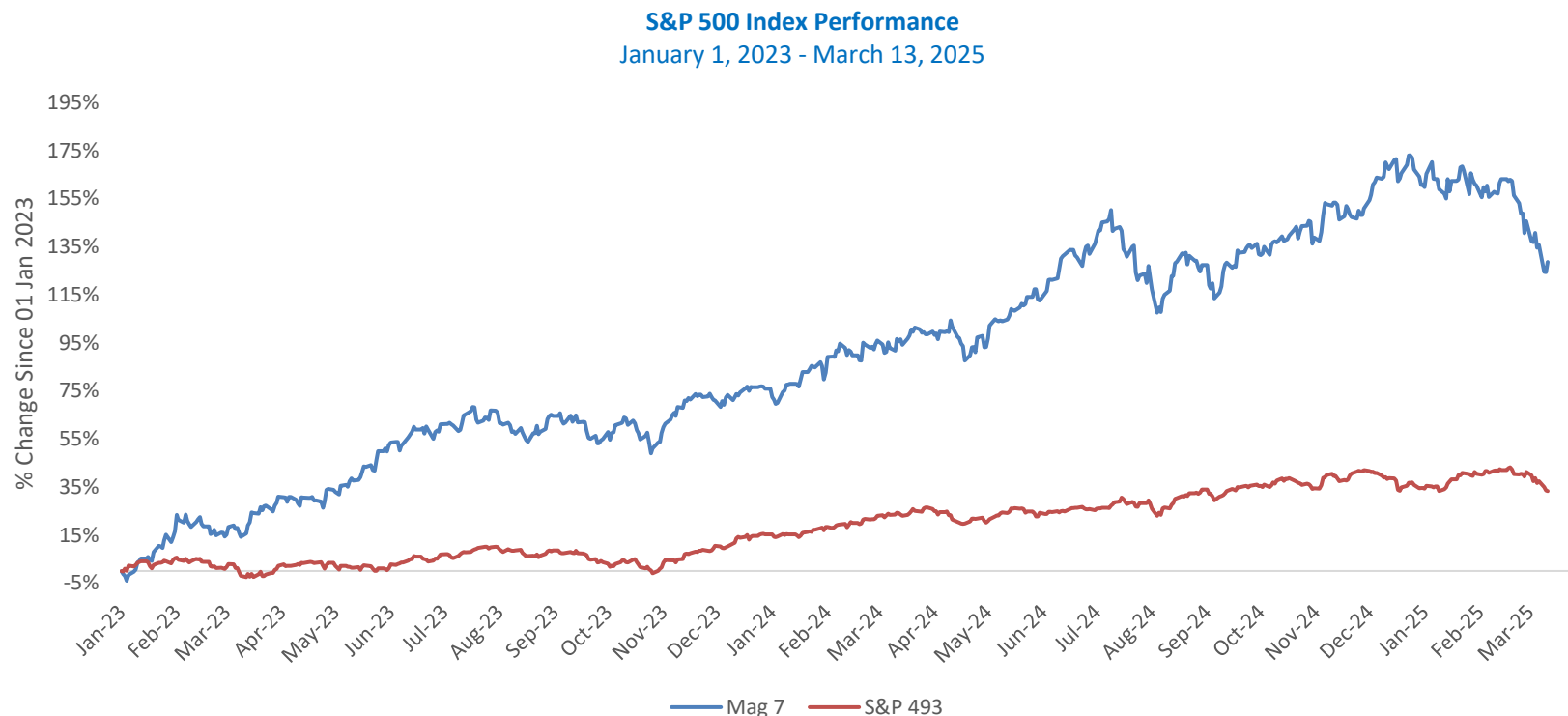
Proponents often cite behavioral aspects of speculative crises and bubbles

- **Bubble Beliefs:** A grain of truth; certain asset classes or sector benefit from innovation or changes in preferences from which changes in valuations are supported.
- **Herd Behavior:** Investors imitate others, amplifying asset bubbles and sell-offs.
- **Overconfidence and Euphoria:** During manias, market participants underestimate risks and overestimate returns.
- **Moral Hazard:** Lenders and borrowers take excessive risks, believing they will be bailed out.

Defining a Bubble: Not Easy

But defining a bubble itself is very difficult. How do you personally define a bubble?

Large run-run ups in valuation? If so, over what time period? What is “large?” Concentration in sectors, industries, classes? How about recent experience? Prices outpacing earnings? Or earnings extrapolation being extreme?



S&P 500 Concentration is at its Highest Level in More Than 30 Years



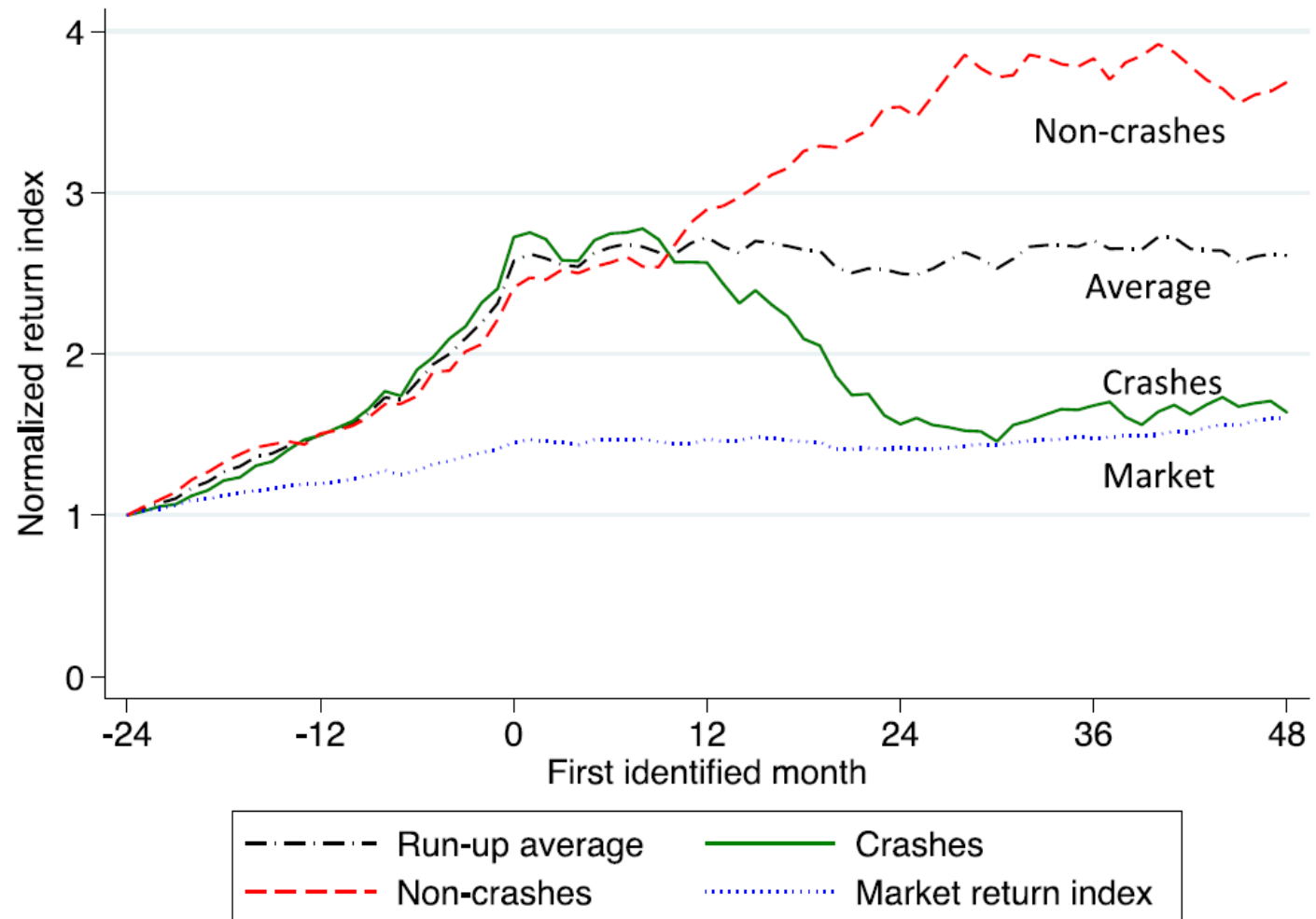
Source: FactSet, Compustat, Goldman Sachs Global Investment Research

Not All Bubbles Pop!

The graphic shows cumulative returns for indexes 49 US industries over the last approximately 100 years that had bubbles, where bubbles are defined as a 100% or larger runup over previous 2 years (gross and net of market) and a 50% or larger runup over the previous 5 years.

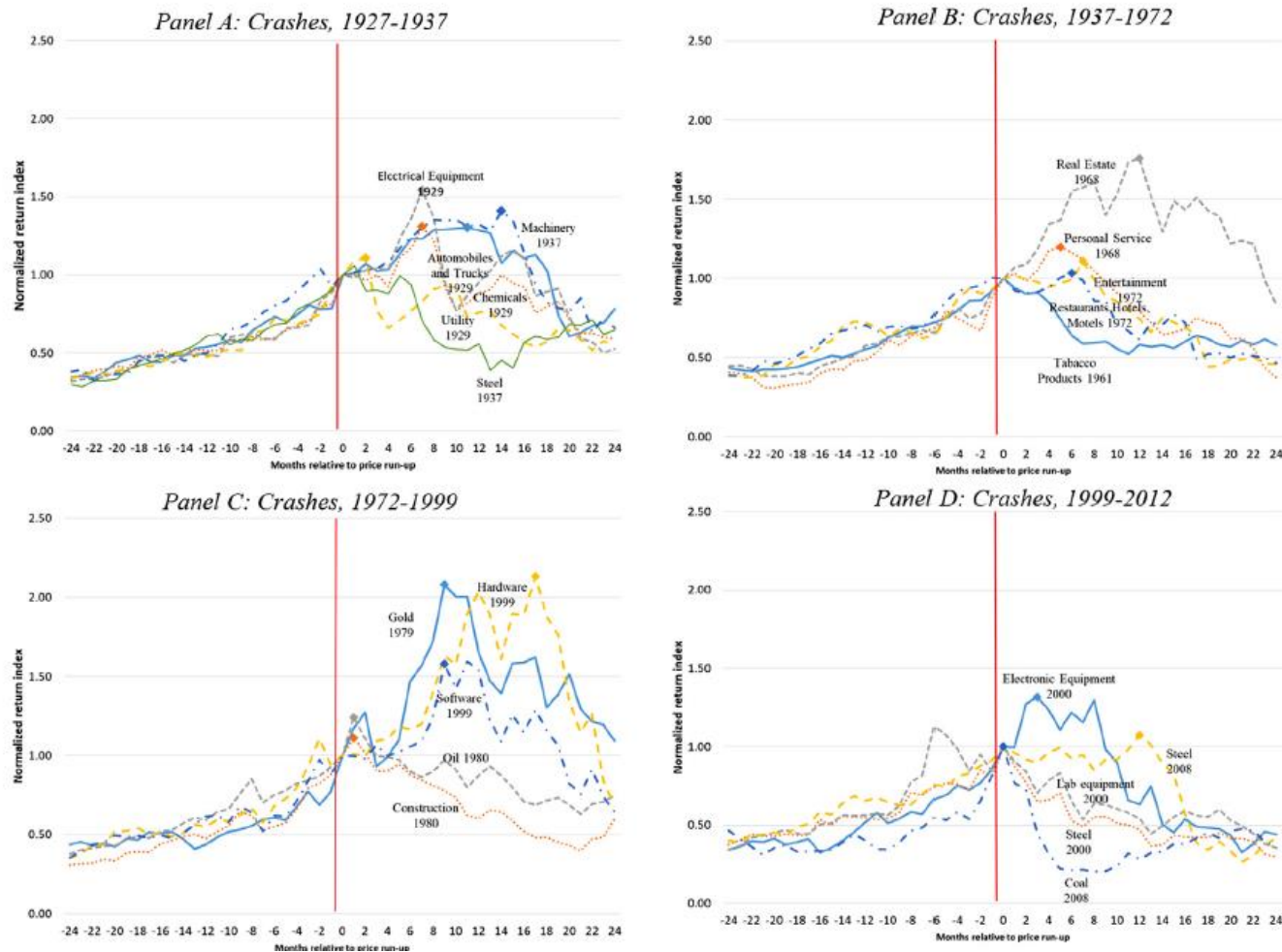
Crashes are defined as a drop of 40% or more over the next two years following 2 years after the runup.

There are 40 such episodes in the historical data. 21 episodes experienced a crash. 19 did not crash.



Greenwood, et al. (2020).

Twenty-One One Crash Episodes Following Bubble-Like Runups in Valuations



Predicting when a bubble-like period will burst is very difficult. But there are some clues.

Substantial value runups are associated with increased probability of crashes or non-continuation of runups.

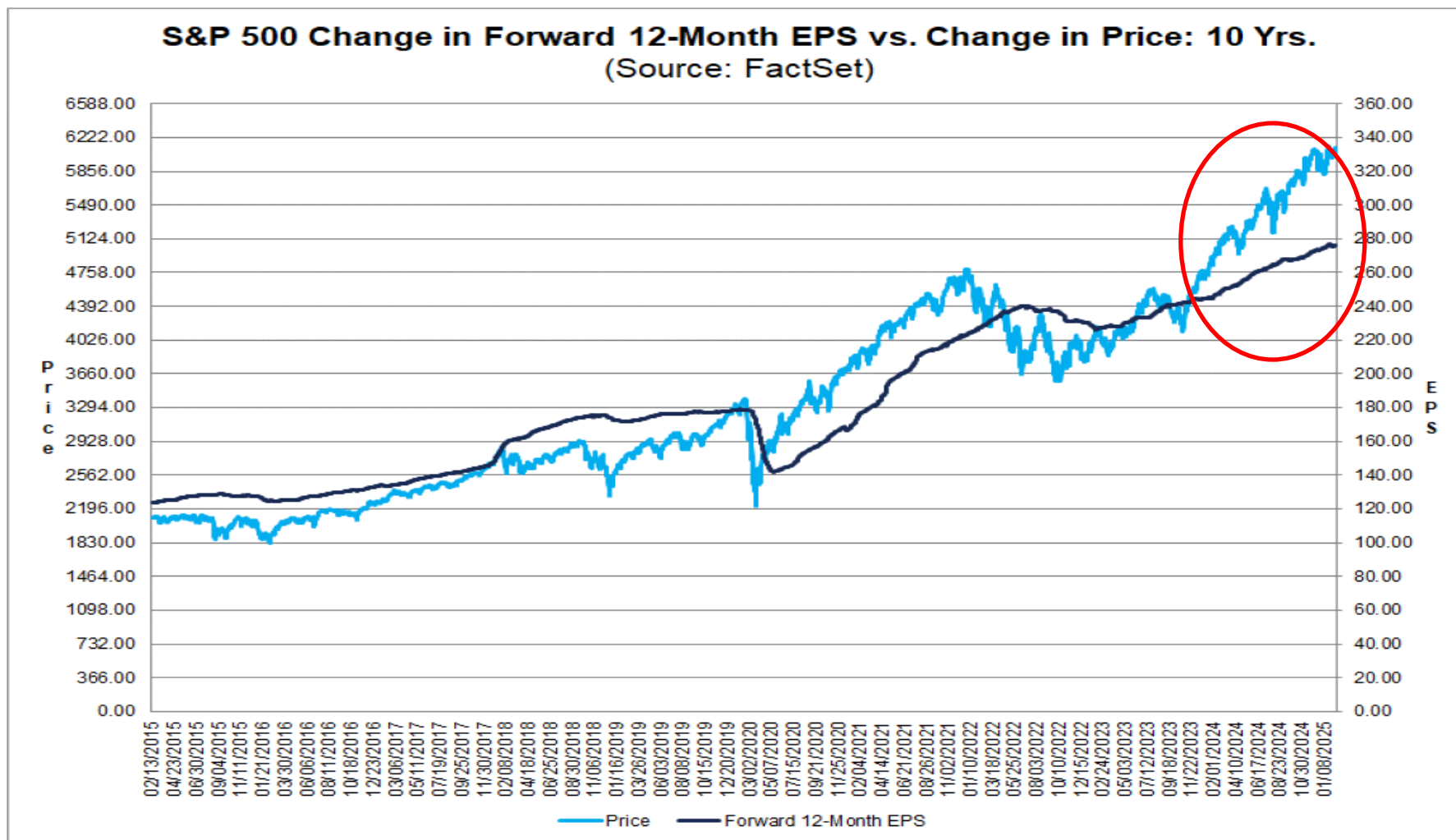
There are some clues that are correlated with higher probabilities of subsequent crash-like episodes. These characteristics of the *runup period*:

- Magnitude and further/continued runup (price path); i.e, a 120% runup is more predictive than a 100% runup.
- Increased volatility during the runup.
- Increased issuances and turnover.
- These characteristics also help forecast not just the probability of a crash but the magnitude.

18.2% Q4 S&P 500 Earnings Growth

- Stock market forecaster FactSet Earnings Insight reported Q4 earnings growth for the S&P 500 was +18.2% for Q4, six percentage points higher than its estimate of just six weeks ago,
- 75% of companies reported earnings beats and 63% reported revenue beats. This continues a trend of more than half of all S&P 500 companies reporting quarterly results that beat their own forecasts.
- FactSet commented on an interesting phenomenon: With the recent strength of the U.S. dollar, one would expect that U.S. companies with substantial international operations would be reporting lower revenues. But they aren't. FactSet speculates it's because of the continuing revenue growth of Nvidia, whose international chip sales have boomed.
- Valuation: The forward 12-month P/E ratio was 21.2 as of Feb. 28, well above the 5- and 10-year trailing averages. The Shiller P/E ratio (CAPE), based on 10 years of earnings, is 40% higher than its 20-year average.

S&P 500 Price Growth is Still Outpacing Earnings Growth



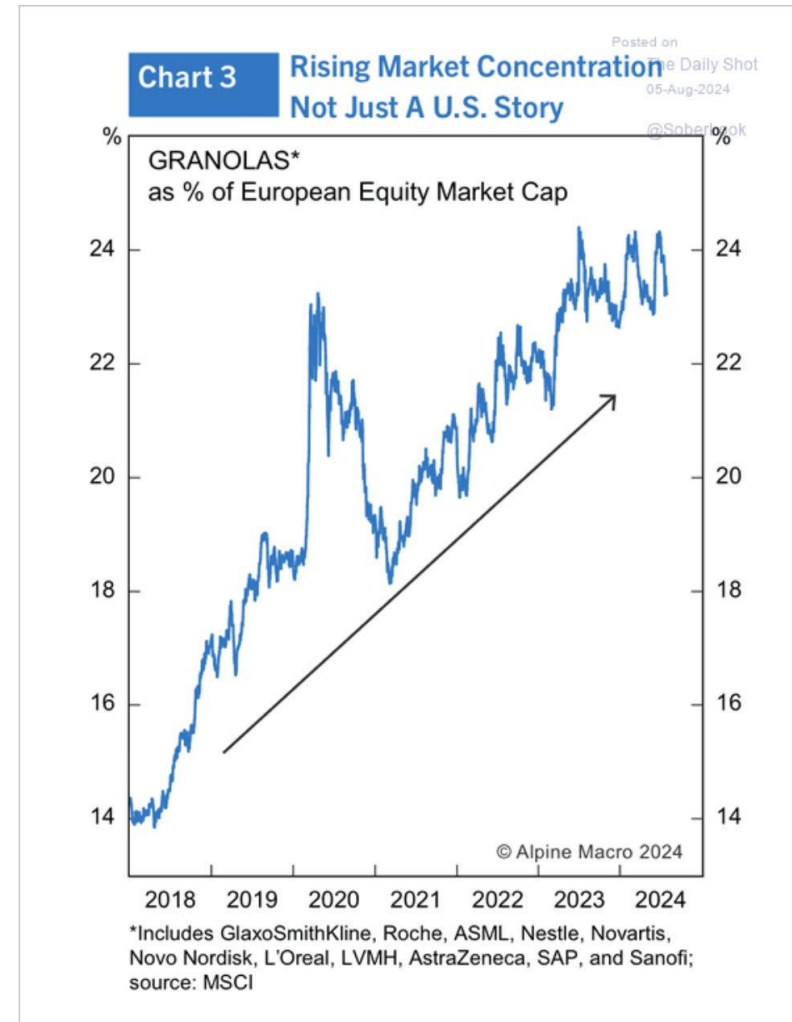
Source: FactSet Earnings Insight (Feb. 14, 2025).

Stock Market Concentration Isn't Just a U.S. Phenomenon

The 11 largest European stocks (the so-called “GRANOLAS”) account for almost 25% of Euro equity capitalization.

GRANOLAS

GlaxoSmithKline
Roche
ASML
Nestlé
Novartis
Novo Nordisk
L’Oreal
LVMH
AstraZeneca
SAP
Sanofi



Source: Alpine Macro

Source: Alpine Macro & MSCI.

U.S. vs. International Equity Annual Returns

Cycles Exist

Rank	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
1	S&P 500 32.51%	MSCI EAFE -1.03%	S&P 500 21.55%	MSCI EAFE 24.61%	MSCI EAFE 7.86%	MSCI EAFE 56.72%	MSCI EAFE 69.94%	MSCI EAFE 24.93%	MSCI EAFE 28.59%	S&P 500 33.01%
2	MSCI EAFE 24.43%	S&P 500 -4.92%	MSCI EAFE -0.86%	S&P 500 22.56%	S&P 500 6.27%	S&P 500 31.73%	S&P 500 18.67%	S&P 500 5.25%	S&P 500 16.61%	MSCI EAFE 10.8%

Rank	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
1	S&P 500 -3.1%	S&P 500 30.47%	S&P 500 7.62%	MSCI EAFE 32.94%	MSCI EAFE 8.06%	S&P 500 37.58%	S&P 500 22.96%	S&P 500 33.36%	S&P 500 28.58%	MSCI EAFE 27.3%
2	MSCI EAFE -23.2%	MSCI EAFE 12.5%	MSCI EAFE -11.85%	S&P 500 10.08%	S&P 500 1.32%	MSCI EAFE 11.55%	MSCI EAFE 6.36%	MSCI EAFE 2.06%	MSCI EAFE 20.33%	S&P 500 21.04%

Rank	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1	S&P 500 -9.1%	S&P 500 -11.89%	MSCI EAFE -15.66%	MSCI EAFE 39.17%	MSCI EAFE 20.7%	MSCI EAFE 14.02%	MSCI EAFE 26.86%	MSCI EAFE 11.63%	S&P 500 -37.0%	MSCI EAFE 32.46%
2	MSCI EAFE -13.96%	MSCI EAFE -21.21%	S&P 500 -22.1%	S&P 500 28.68%	S&P 500 10.88%	S&P 500 4.91%	S&P 500 15.79%	S&P 500 5.49%	MSCI EAFE -43.06%	S&P 500 26.46%

Rank	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1	S&P 500 15.06%	S&P 500 2.11%	MSCI EAFE 17.9%	S&P 500 32.39%	S&P 500 13.69%	S&P 500 1.38%	S&P 500 11.96%	MSCI EAFE 25.62%	S&P 500 -4.38%	S&P 500 31.49%
2	MSCI EAFE 8.21%	MSCI EAFE -11.73%	S&P 500 16.0%	MSCI EAFE 23.29%	MSCI EAFE -4.48%	MSCI EAFE -0.39%	MSCI EAFE 1.51%	S&P 500 21.83%	MSCI EAFE -13.36%	MSCI EAFE 22.66%

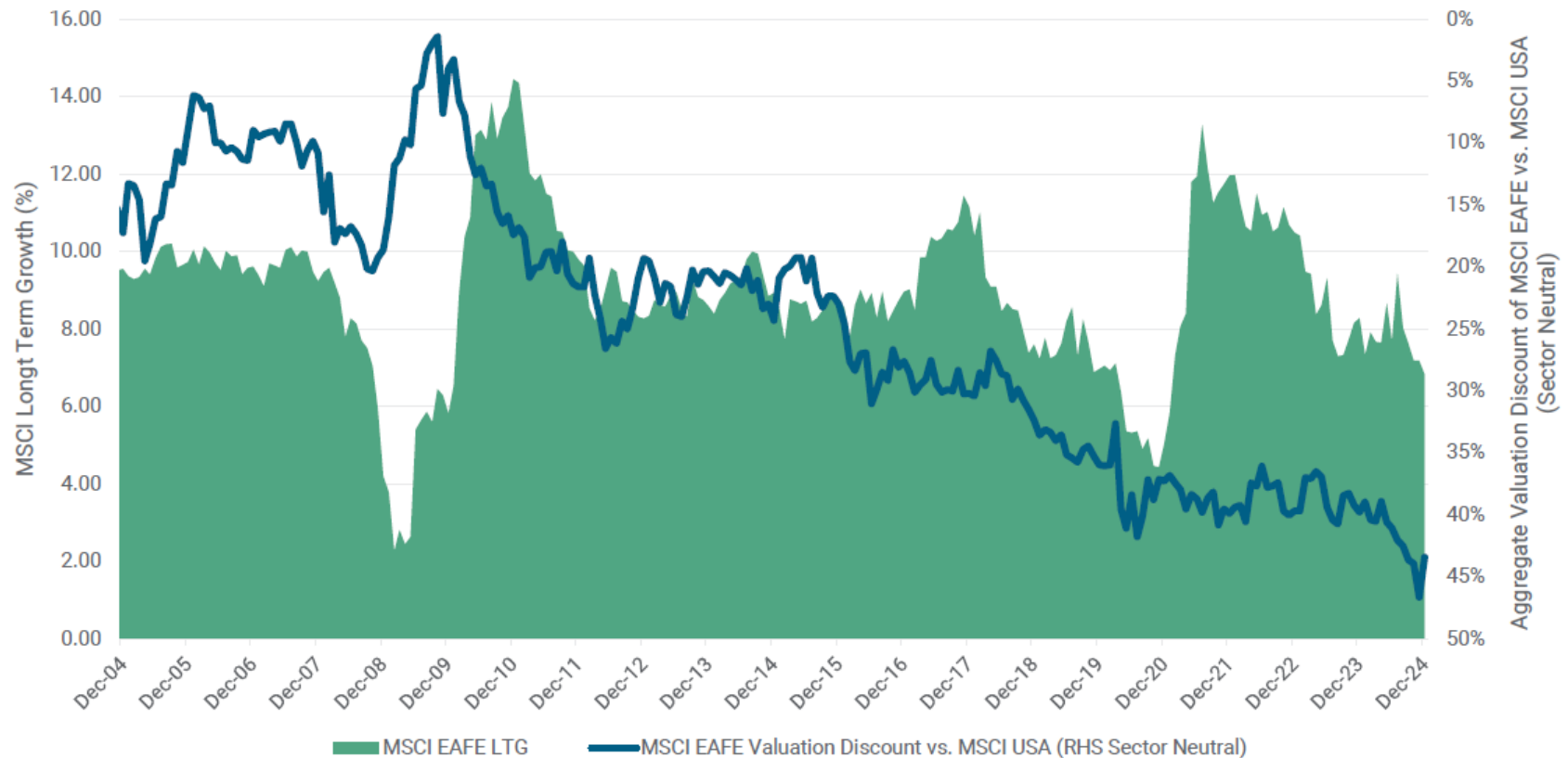
Rank	2020	2021	2022	2023	2024
1	S&P 500 18.4%	S&P 500 28.71%	MSCI EAFE -14.01%	S&P 500 26.29%	S&P 500 25.02%
2	MSCI EAFE 8.28%	MSCI EAFE 11.78%	S&P 500 -18.11%	MSCI EAFE 18.85%	MSCI EAFE 4.35%



EAFE Valuation Discount vs. MSCI USA is Increasing as EAFE Earnings Growth Slumps

International vs. U.S. Equity Valuations and Expected Long Term International Earnings Growth

Long-Term Earnings Growth of MSCI EAFE and Sector Neutral Valuation vs. MSCI USA



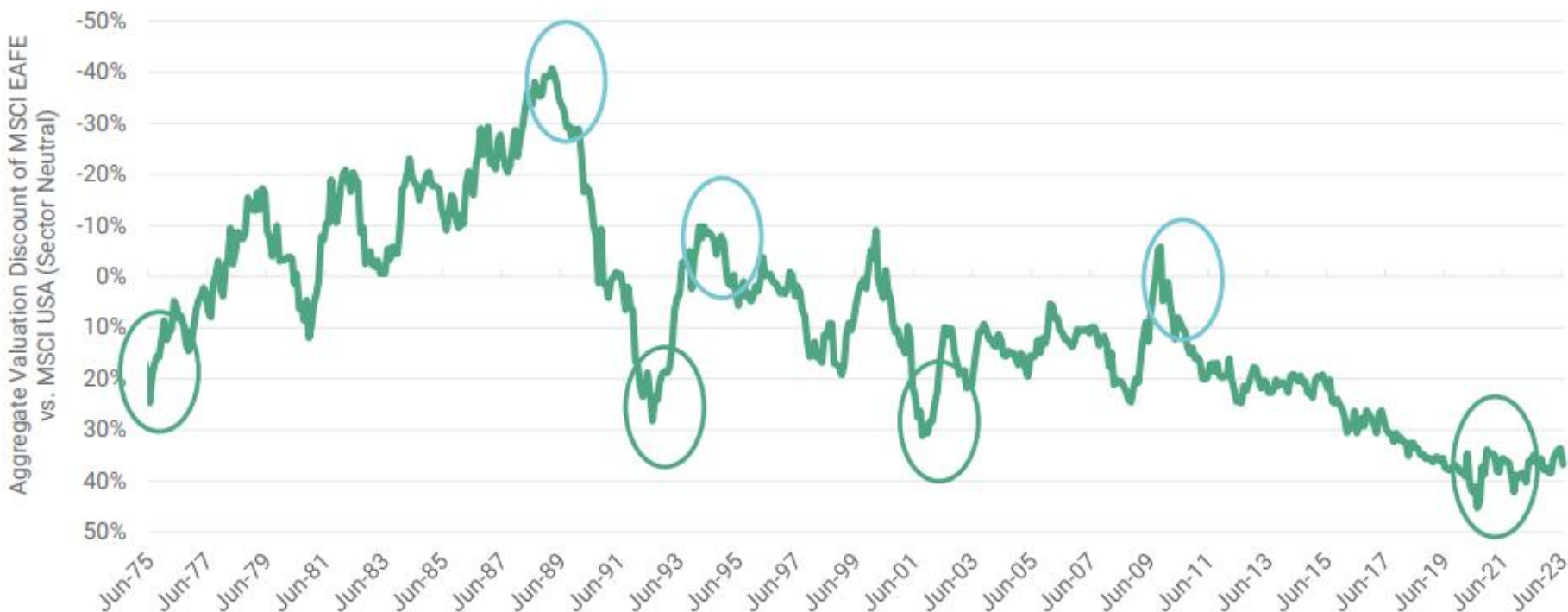
DECEMBER 31, 2004 TO DECEMBER 31, 2024 | Source: MSCI via FactSet. Past performance is not a guarantee of future results. It is not possible to invest directly in an index. For each fundamental ratio (Price/Book, Forward Price/Earnings, Price/Cash Flow), we calculate the average ratio of the MSCI EAFE Index and divide it by the average ratio of the MSCI USA Index to determine the relative valuation. Aggregate valuation discount based on the average of each individual metric's valuation discount of the MSCI EAFE index relative to MSCI USA index. Expected 3-5 year earnings growth of the companies in the index.



EAFE Valuation Discount vs. MSCI USA is Increasing as EAFE Earnings Growth Slumps

International vs. U.S. Equity Valuations and Returns

Sector Neutral Valuation of MSCI EAFE vs. MSCI USA



Largest EAFE Discounts

Cumulative Returns	Dec 74 – Dec 79	Jul 92 – Jul 95	Nov 01 – Nov 06
MSCI USA	11.7%	12.3%	5.5%
MSCI EAFE	17.9%	16.0%	14.4%

Largest EAFE Premiums

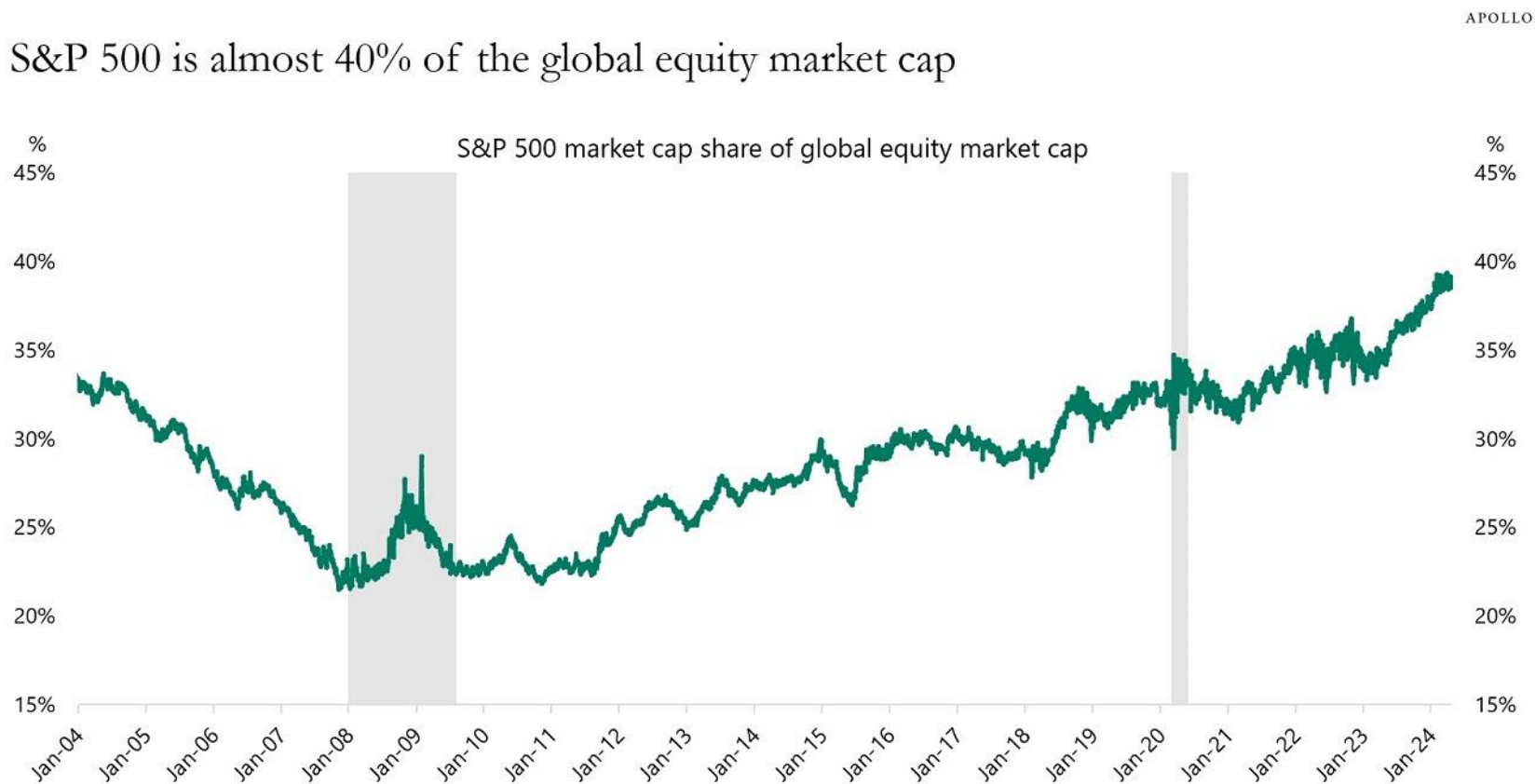
Feb 89 – Feb 92	Apr 94 – Apr 99	Oct 09 – Oct 19
16.0%	27.2%	13.0%
-4.3%	8.7%	5.4%

DECEMBER 31, 1974 TO JUNE 30, 2023 | Source: MSCI via FactSet. Past performance is not a guarantee of future results. It is not possible to invest directly in an index. For each fundamental ratio (Price/Book, Price/Earnings, Price/Cash Flow), we calculate the average ratio of the MSCI EAFE Index and divide it by the average ratio of the MSCI USA Index on a sector neutral basis to determine the relative valuation. Aggregate valuation discount based on the average of each individual metric's valuation discount of MSCI EAFE relative to MSCI USA. Values below zero indicate MSCI EAFE valuations are lower than MSCI USA valuations. The MSCI USA Index and the MSCI EAFE Index were launched on March 31, 1986. Data prior to the launch date is back-tested by MSCI (i.e., calculations of how the index might have performed over that time period had the index existed). There are frequently material differences between back-tested performance and actual results. Annualized returns as of June 30, 2023: MSCI EAFE: 1-yr: 18.55%; 5-yr: 4.39%; 10-yr: 5.41%. MSCI USA: 1-yr: 18.98%; 5-yr: 11.59%; 10-yr: 12.15%.



S&P 500 Market Cap % of Global Market Cap Near 40%, Highest in Decades

S&P 500 is almost 40% of the global equity market cap

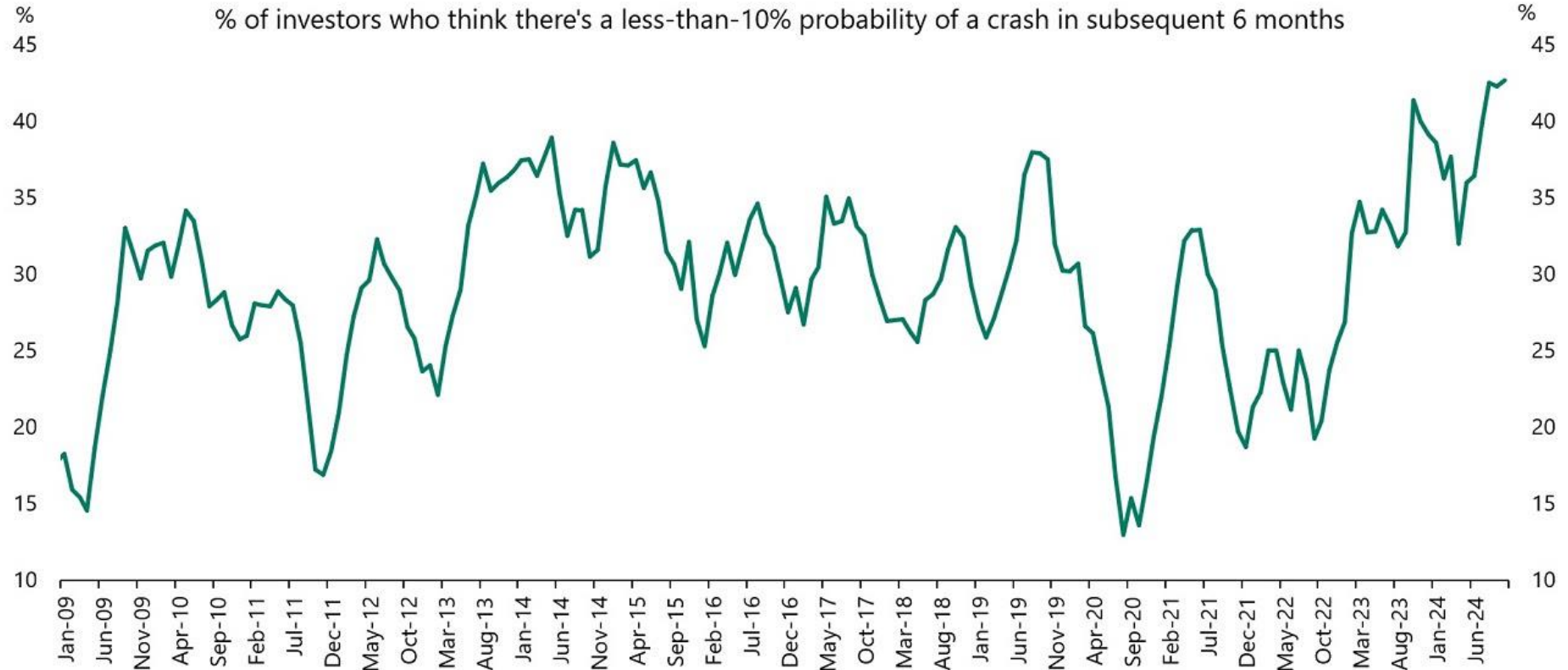


Source: Bloomberg, Apollo Chief Economist

More Than 40% of Investors Think There's < 10% Chance of Stock Market Crash in Next 6 Months

APOLLO

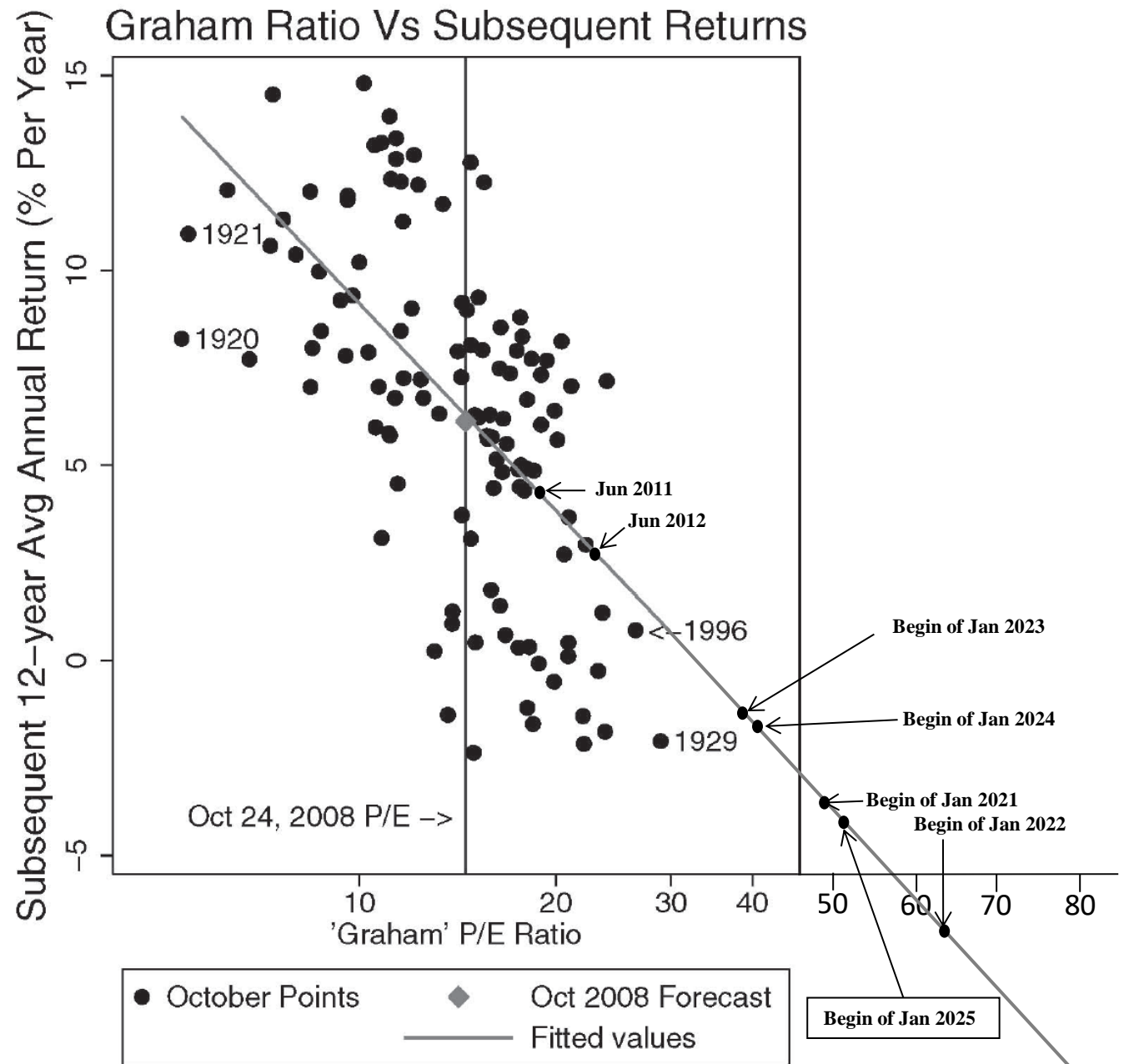
A record-high share of investors think there is less than 10% probability of a crash in the stock market



Source: Yale School of Management, Robert Shiller, Apollo Chief Economist.

The Graham Ratio

- The Graham Ratio is the ratio of current price level of the U.S. S&P 500 divided by 12-year lagged earnings.



From Carroll (2008)

Growth Style vs. Value in Q4: Growth Wins Big

- One of the biggest themes in U.S. stocks during the last two years has been the competition between Growth and Value investing styles. In Q4, Value fell 2.4% after a 8.9% gain in Q3 (Russell 3000 Value Total Return index). The “growth of Growth” accelerated: The Russell 3000 Growth index rose 6.7% after rising 3.3% in Q3, and soaring 40% in 2023.
- Among S&P 500 stocks, the best-performing stock of 2024 wasn't Nvidia which came in third with a 171% gain. Utilities firm Vistra soared 261% for second place, and the winner was data analytics firm Palantir, which rose 340%.

Palantir CEO Alex Karp



A Cold Winter for ESG Investing

- The popularity of socially responsible or “ESG” investing has been declining since Republican political attacks on the concept started in 2022. Several recent developments may have accelerated the pullback.
- The election of Donald Trump was a negative signal for ESG. Regulators in the first Trump Administration were skeptical about letting pension plans – which include more than two-thirds of all U.S. invested assets – use ESG factors in investment decisions.
- Moreover, Trump’s currently influential advisers Elon Musk and Vivek Ramaswamy are both passionately anti-ESG. Ramaswamy even ran for President on the issue.
- Just recently, a blockbuster decision by a Federal judge in Fort Worth may have sounded the death knell for ESG investing in ERISA pension plans. The judge found the American Airlines 401(k) plan violated ERISA’s duty of loyalty to beneficiaries when it invested with asset manager BlackRock, which was on an ESG crusade. BlackRock has been backing away from ESG over the past year.
- The *Spence* (American Airlines) decision might be reversed on appeal.

U.S. Demand: Durable Goods Orders

During January durable goods orders rose 3.1%. The less-noisy benchmark measure within the report, nondefense capital goods ex aircraft orders, rose 0.8%.



DURABLE GOODS – NEW ORDERS

JANUARY 2025	\$286.0 billion	+3.1%^o
DECEMBER 2024 (revised)	\$277.3 billion	-1.8%^o

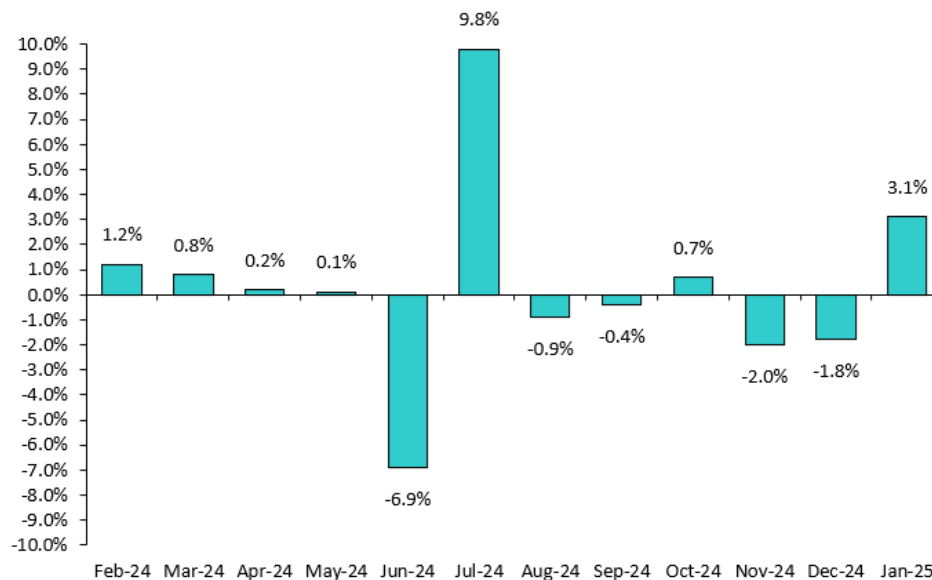
Next release: March 26, 2025

Data adjusted for seasonal variation but not for price changes.

^oStatistical significance is not measurable for this survey. The Manufacturers' Shipments, Inventories, and Orders estimates are not based on a probability sample, so the sampling error of these estimates cannot be measured nor can the confidence intervals be computed.

Source: U.S. Census Bureau, Manufacturers' Shipments, Inventories and Orders, February 27, 2025.

DURABLE GOODS NEW ORDERS 2024-2025
Seasonally Adjusted, Month-To-Month Percentage Change



Source: U.S. Census Bureau, Manufacturers' Shipments, Inventories, and Orders, February 27, 2025.

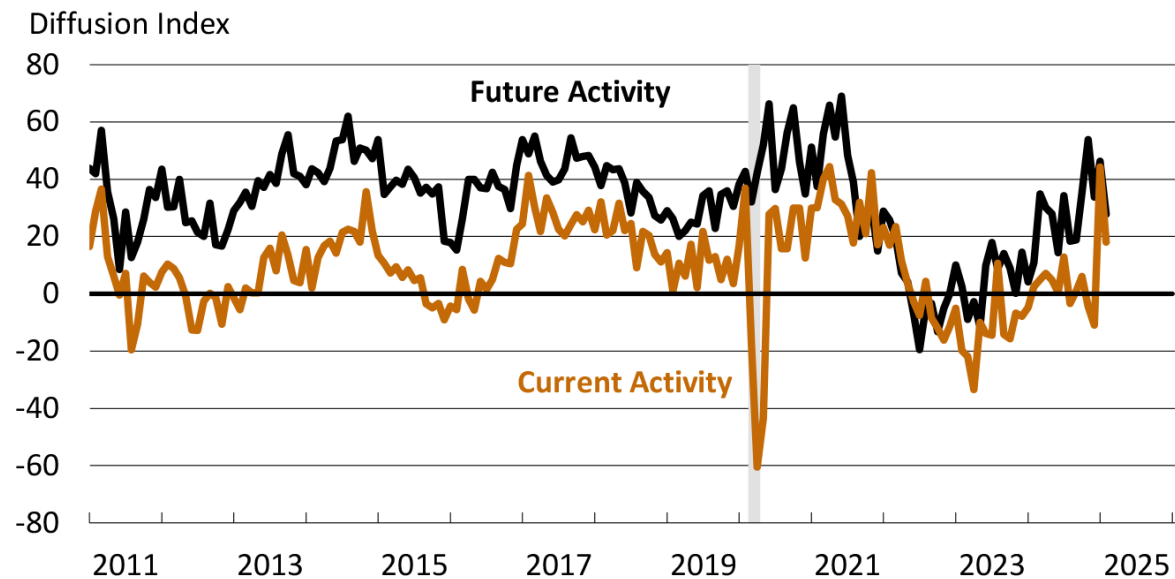
Source: U.S. Census Bureau.

U.S. Demand: Philly Fed Index

The Philadelphia Fed's Manufacturing Business Outlook Survey ("Philly Fed") covers only the bank's home region, but it's considered a bellwether of manufacturers' sentiment nationwide. The Current Activity Index soared from -10.9 in December to 44.3 in January. It was the highest reading for the index since April 2021.

The index fell to 18.1 in February, but it still represents a great improvement over year-end. Positive readings suggest manufacturing activity is expanding.

Chart. Current and Future General Activity Indexes
January 2011 to February 2025



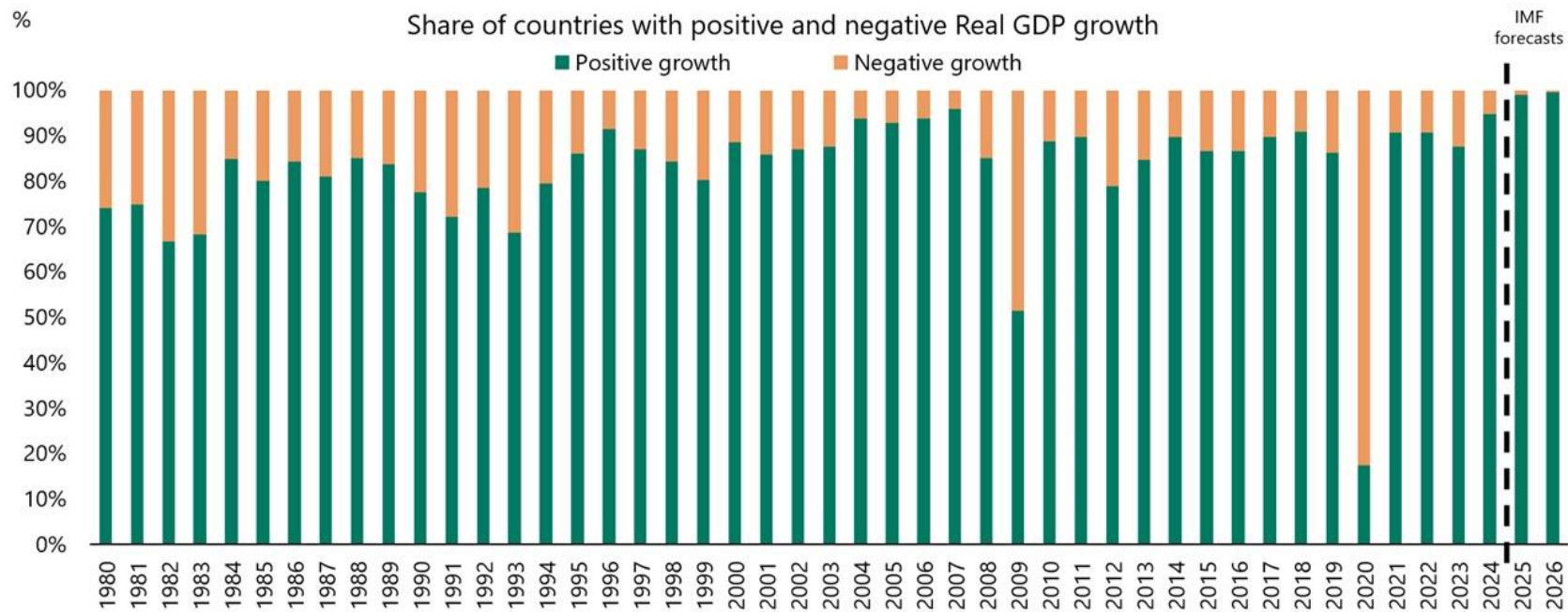
Note: The diffusion index is computed as the percentage of respondents indicating an increase minus the percentage indicating a decrease; the data are seasonally adjusted.

Source: Philly Fed.

A Record Low Number of Countries Worldwide Expected to Be in Recession in 2025/2026

APOLLO

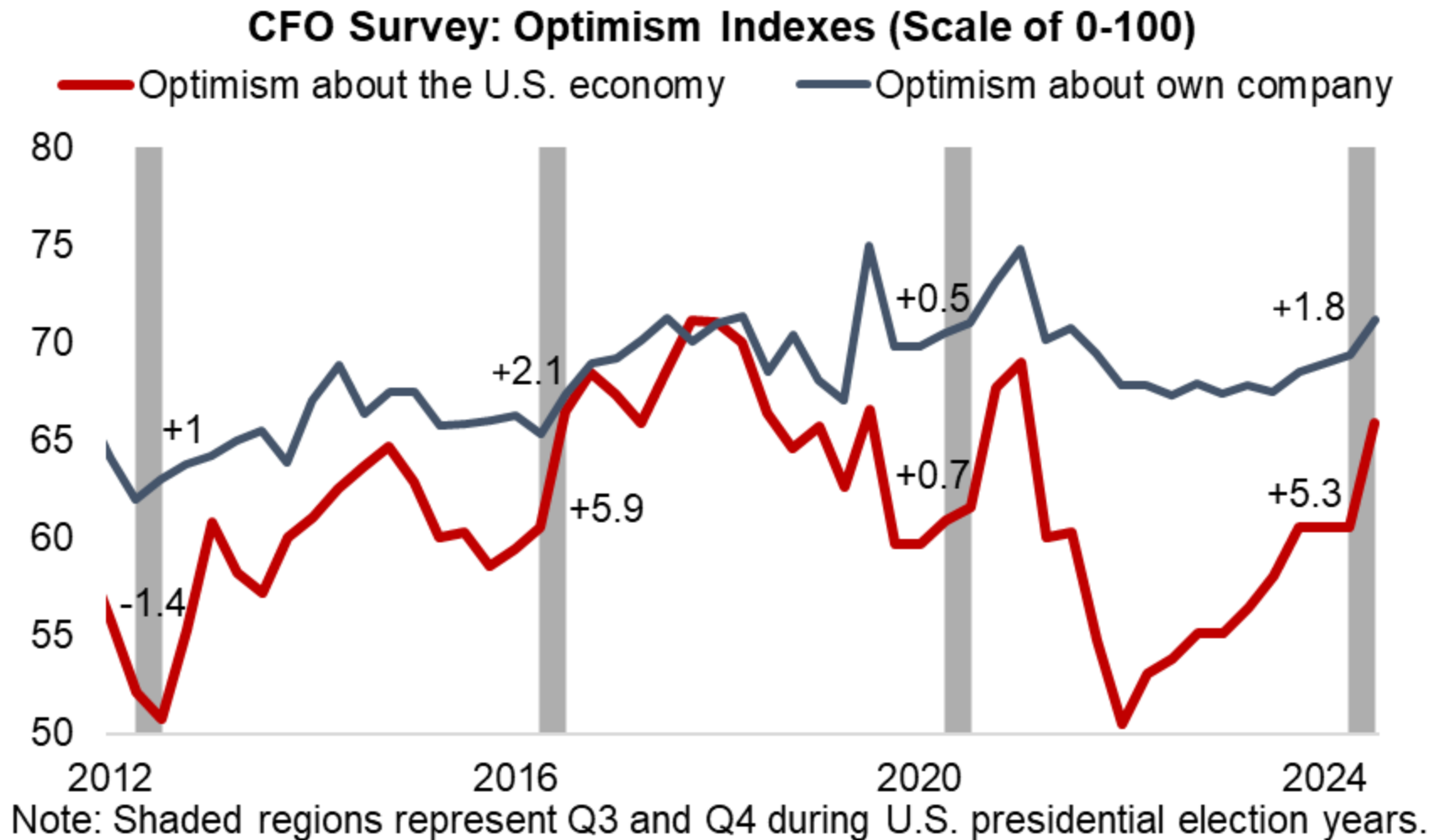
A record-low share of countries expected to be in recession in 2025 and 2026



Source: IMF, Apollo Chief Economist.

CFO Sentiment About the Economy Rose in Q4

In the Richmond Fed's quarterly survey of CEO sentiment, optimism increased significantly following the Republican election wins. A similar boost occurred after the 2016 election.



Small Business Sentiment: Sort of Weak

The National Federation of Independent Business's Small Business Optimism Index fell a bit in February to 100.7, but it's still above the long-term (50-year) average of 98. The index had been below average for 34 months straight before December. 37% of small business owners in the February survey said they expect the economy to improve, 10 points less than in January.

Small Business Optimism Index at 100.7

Based on 10 survey indicators, seasonally adjusted, Jan. '10 – Feb. '25



**Feb. 2025: 100.7
(1986=100)**



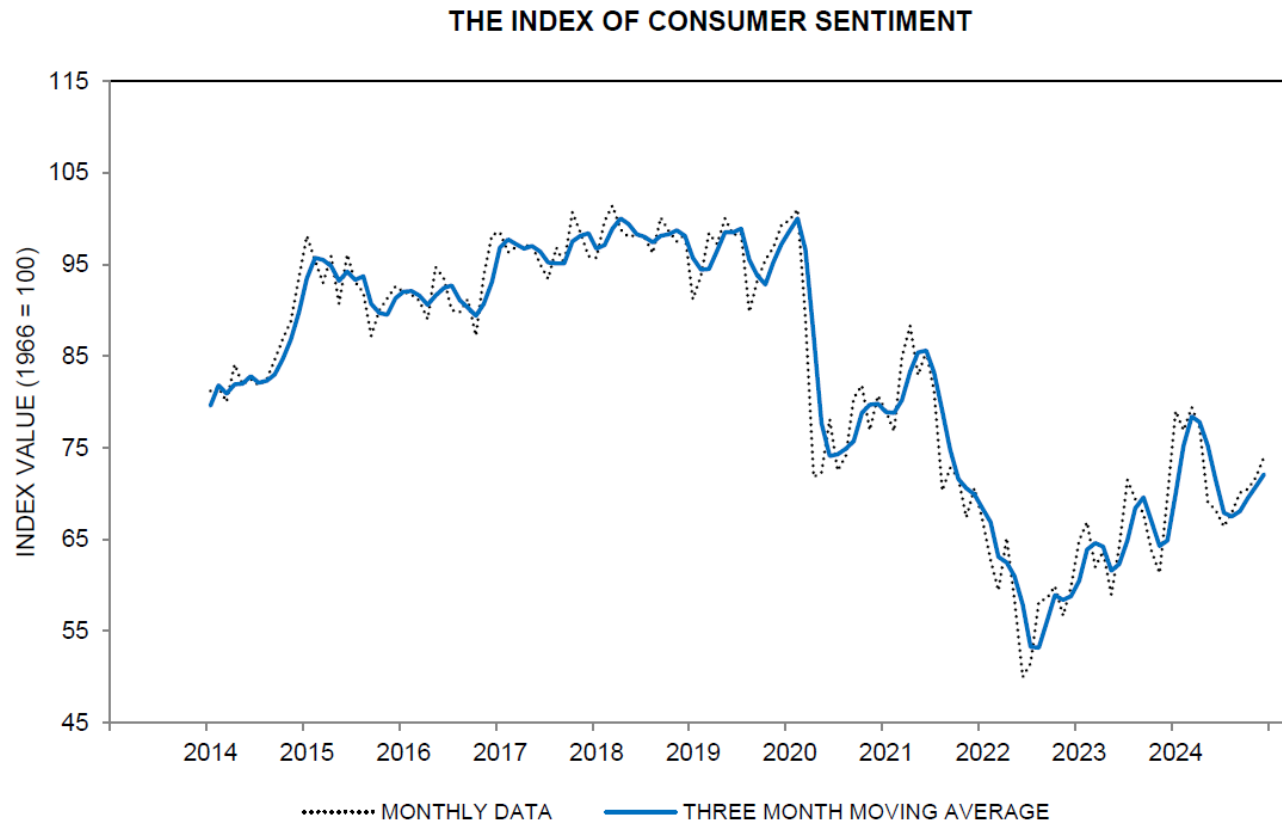
[NFIB.com/sboi](https://www.nfib.com/sboi)

Source: Nat'l Federation of Independent Business.

Michigan Consumer Sentiment Index Is 12% Lower Than Year-Ago

The University of Michigan Consumer Sentiment Index was 67.8 in February (prelim), down from 71.1 in January. for November. **The index is now 12% lower than a year ago.**

Univ. of Michigan Consumer Sentiment Index – Last 10 Years

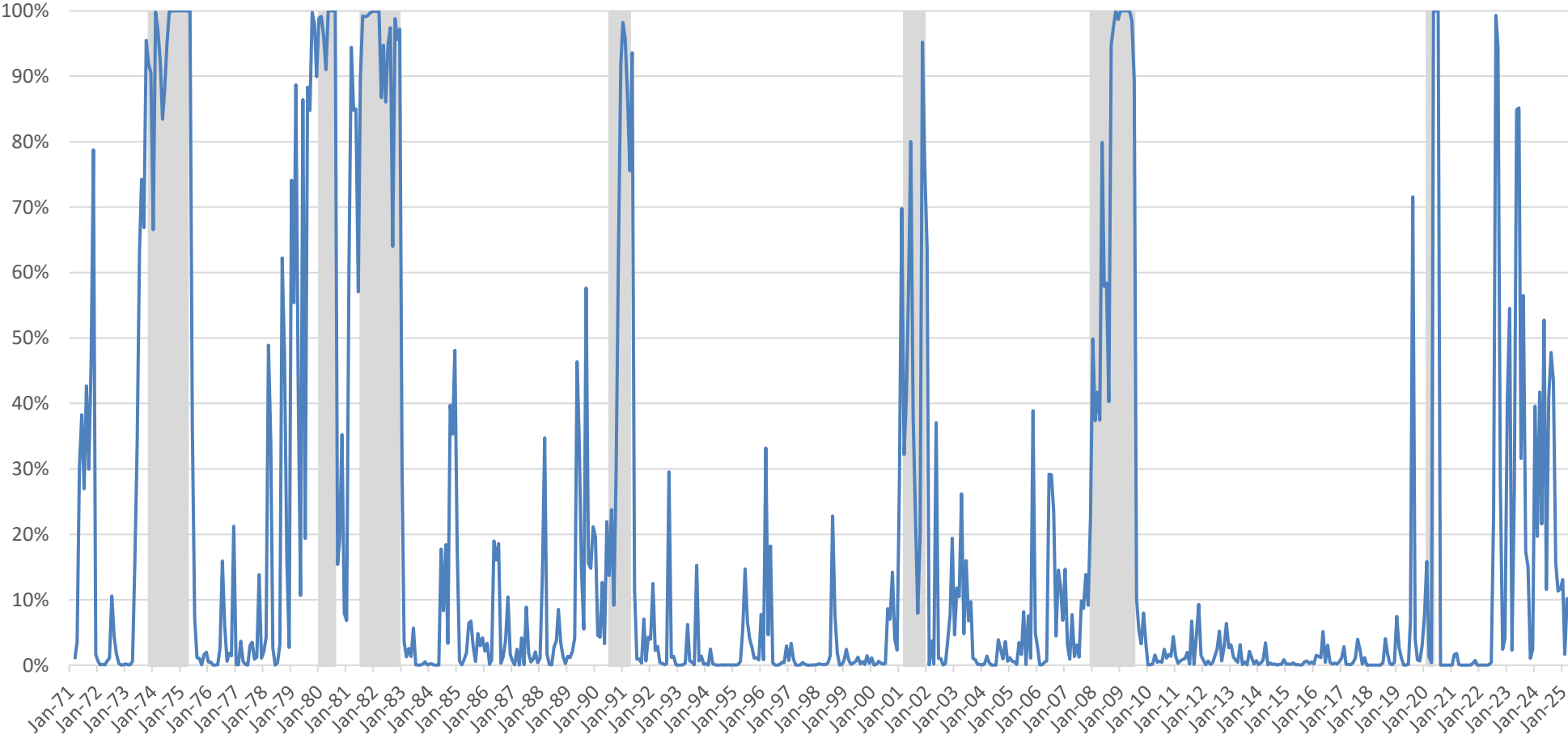


Source: University of Michigan;



Recession Probabilities for the U.S. Economy – 2 Quarters Out

Forecasted Recession Probability for 2-Quarter Forward Period using All Macro Leading Indicators
January 1971 - March 2025



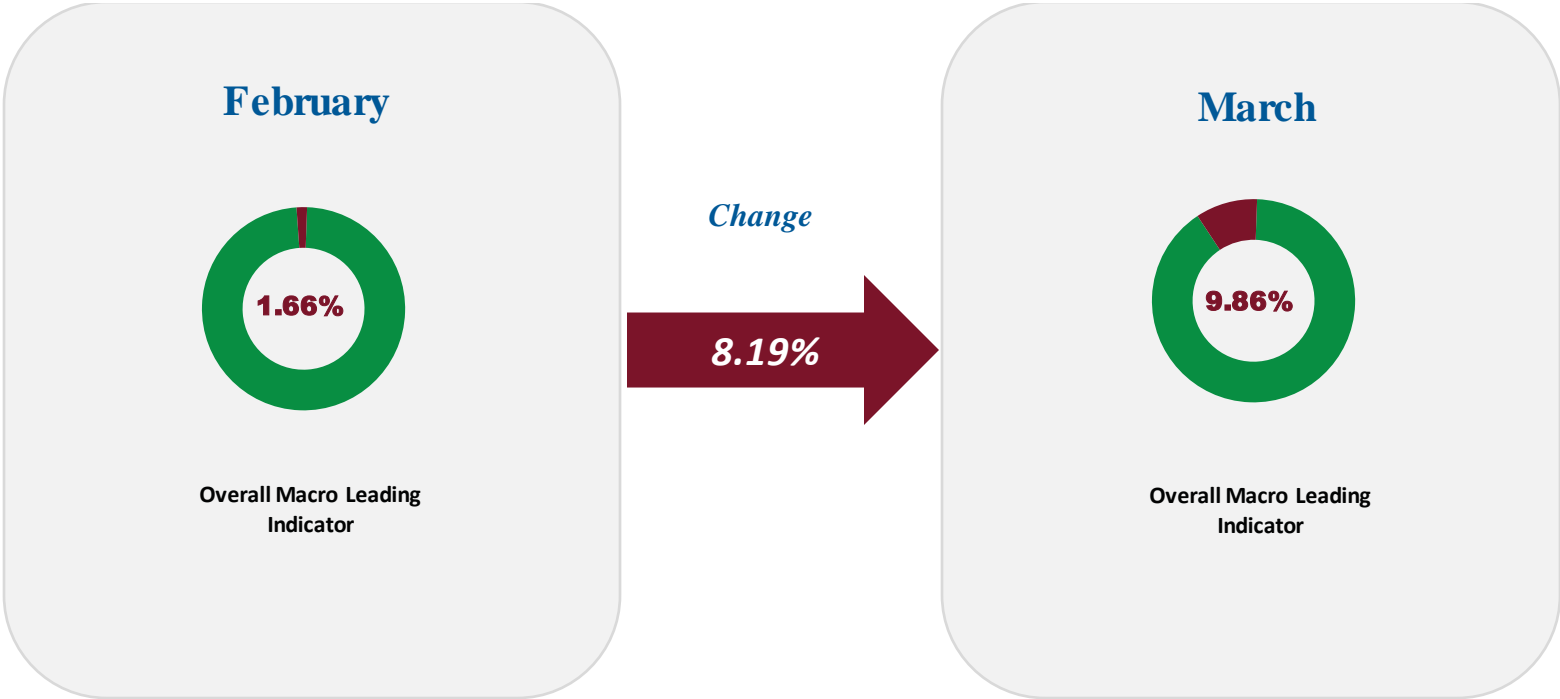
Leading indicators used in this graph are the latest available.

Data is from Bloomberg, Federal Reserve in Chicago, Federal Reserve in St Louis, Conference Board, OECD, Treasury Department, online Robert-Shiller Data, and University of Michigan. Overall Macro Leading, Coincident, and Lagging Indicators are composed of macro leading, coincident, and lagging indicators whose inception date is earlier than January 1973, respectively.

Recession Probability Change Snapshot

Updated to January/February/March 2025

Recession Probabilities Two Calendar Quarters Forward

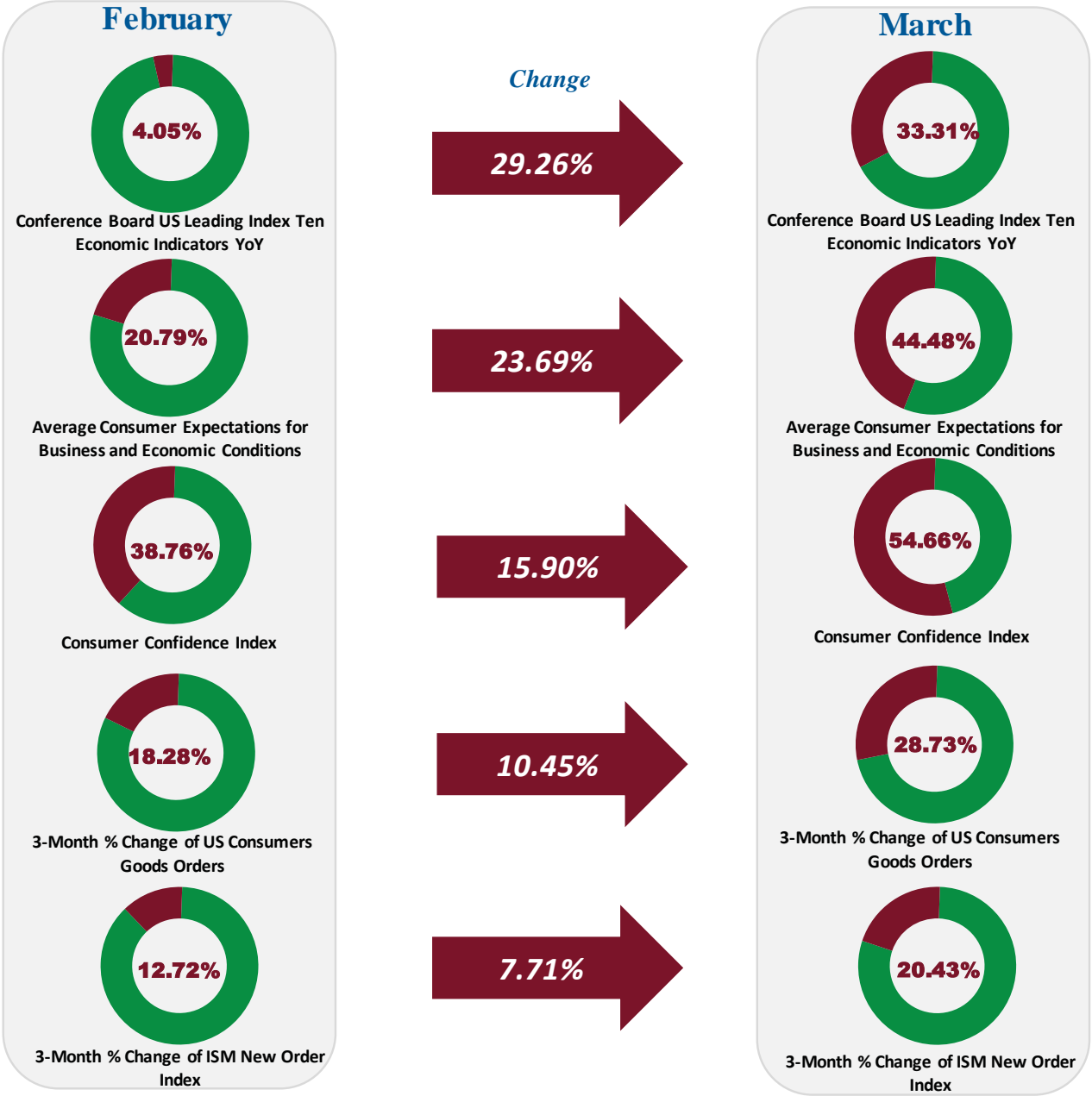


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Recession Probability Change Snapshot



Two Quarters Forward (Updated to January/February/March 2025)

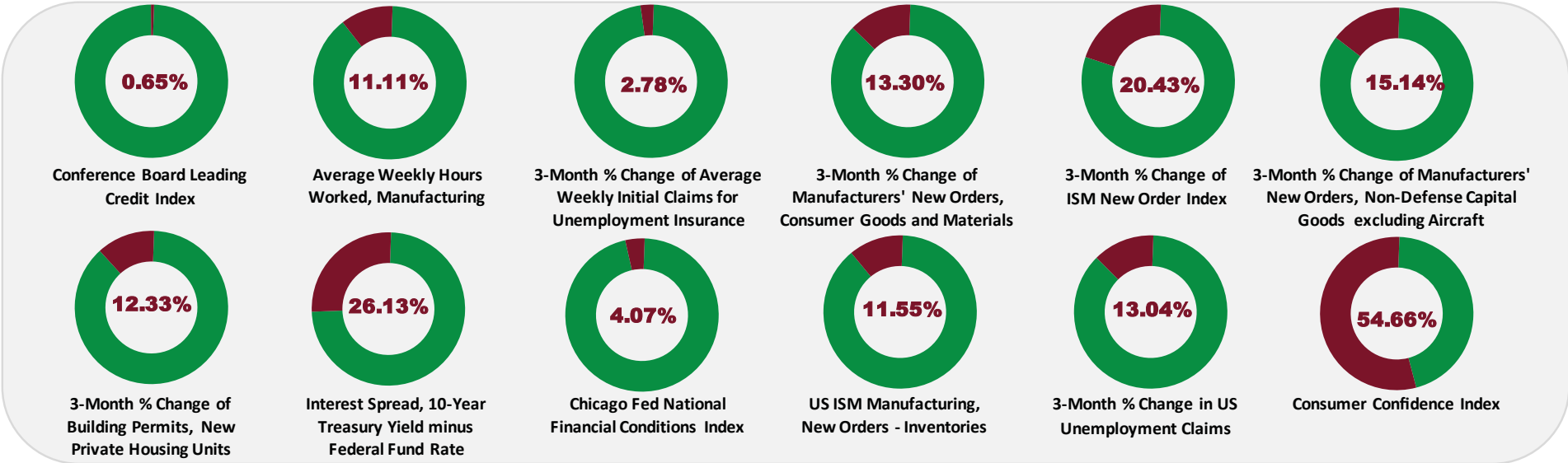
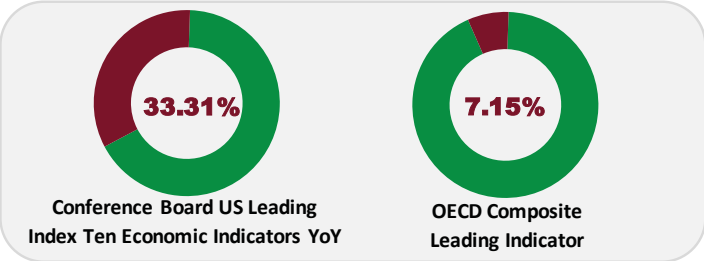
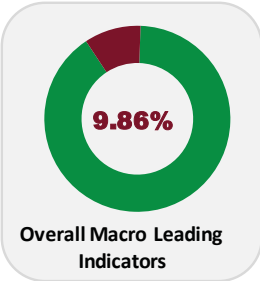


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Economic Update – Recession Probabilities

Updated to January/February/March 2025

Recession Probabilities Two Calendar Quarters Forward



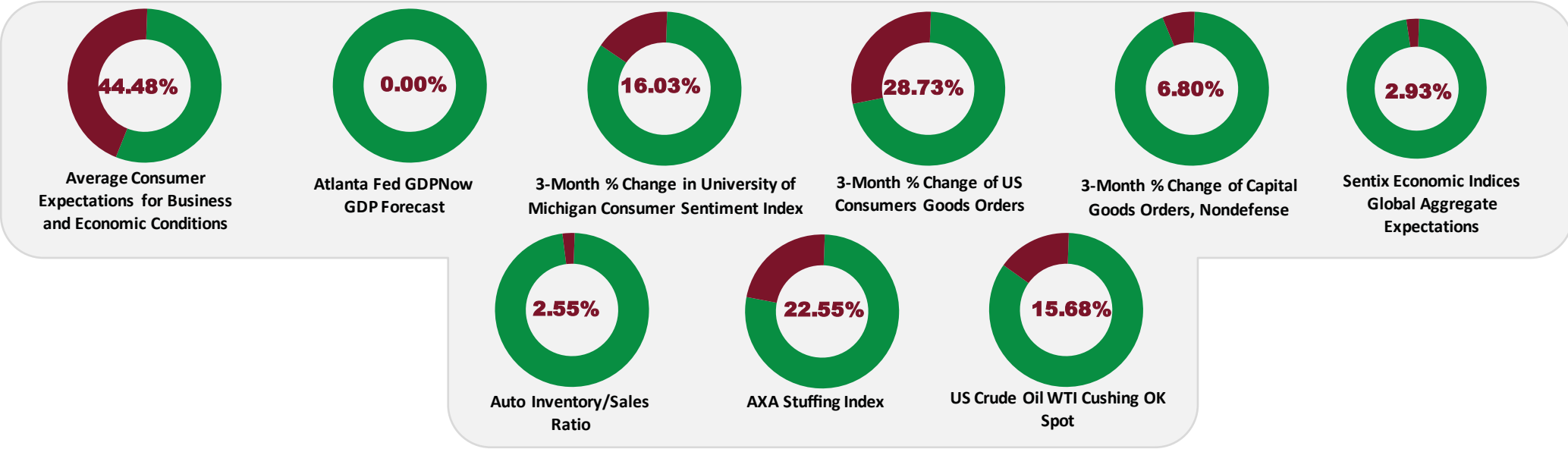
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Economic Update – Recession Probabilities

Updated to January/February/March 2025

Recession Probabilities Two Calendar Quarters Forward



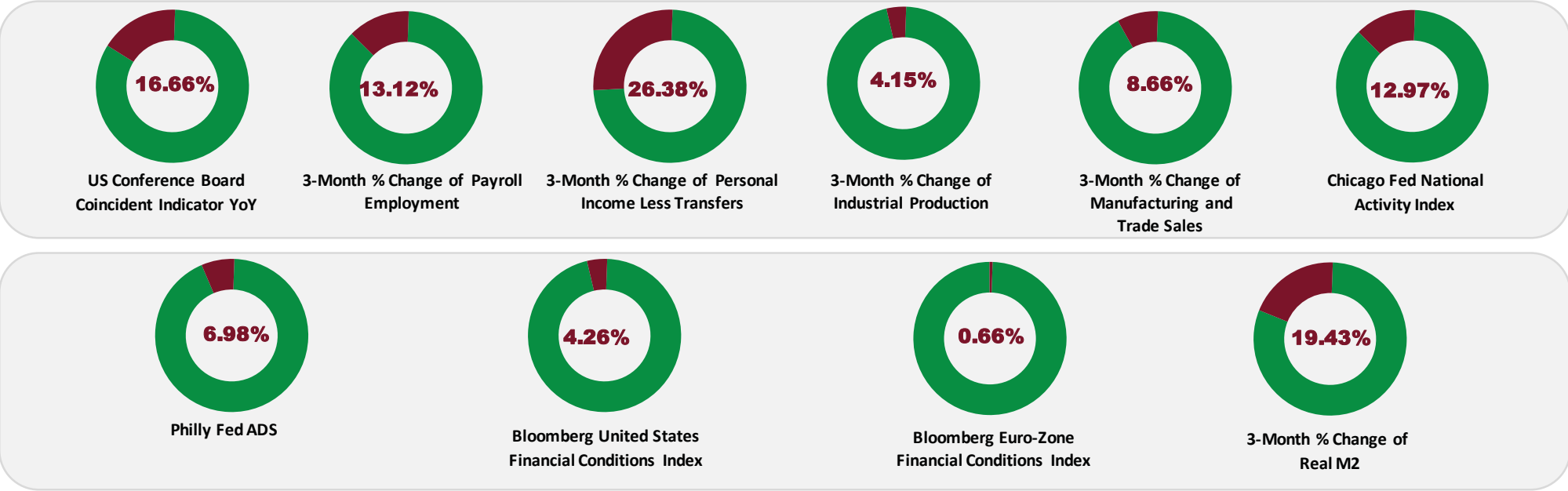
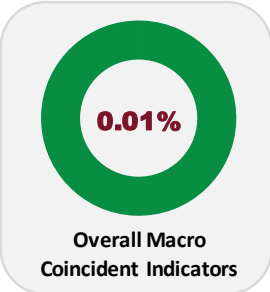
Data is from Bloomberg, Federal Reserve in Chicago, Federal Reserve in St Louis, Conference Board, OECD, Treasury Department, online Robert-Shiller Data, and University of Michigan. Overall Macro Leading, Coincident, and Lagging Indicators are composed of macro leading, coincident, and lagging indicators whose inception date is earlier than January 1973, respectively.

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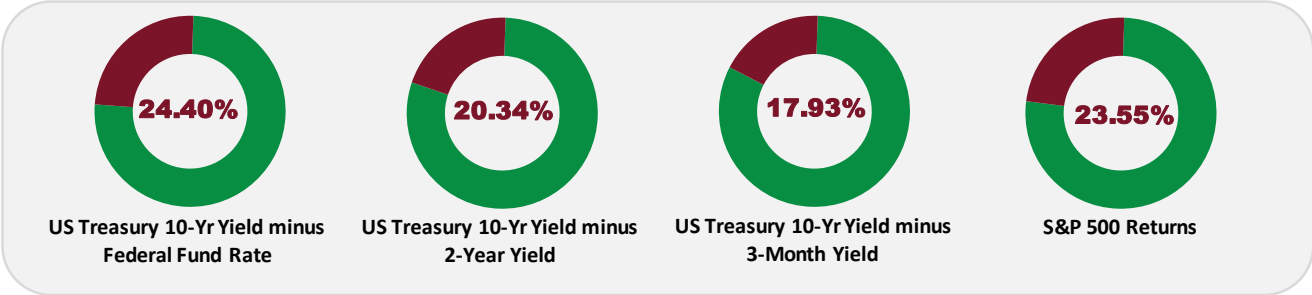
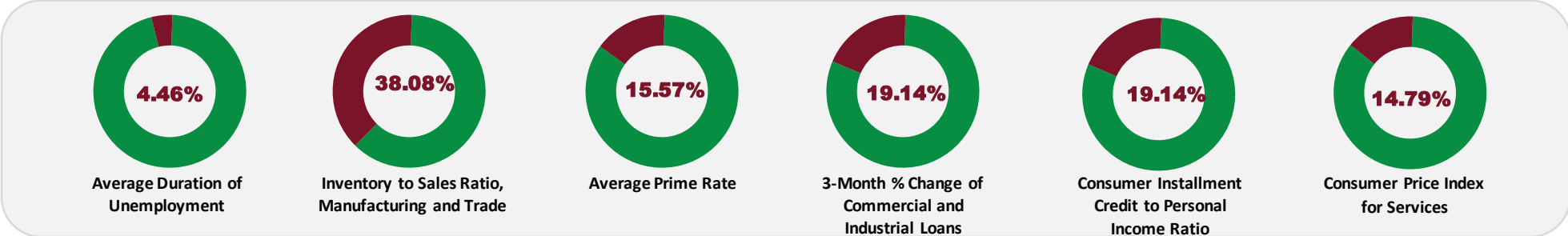
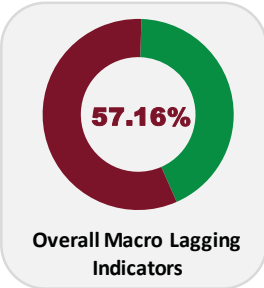


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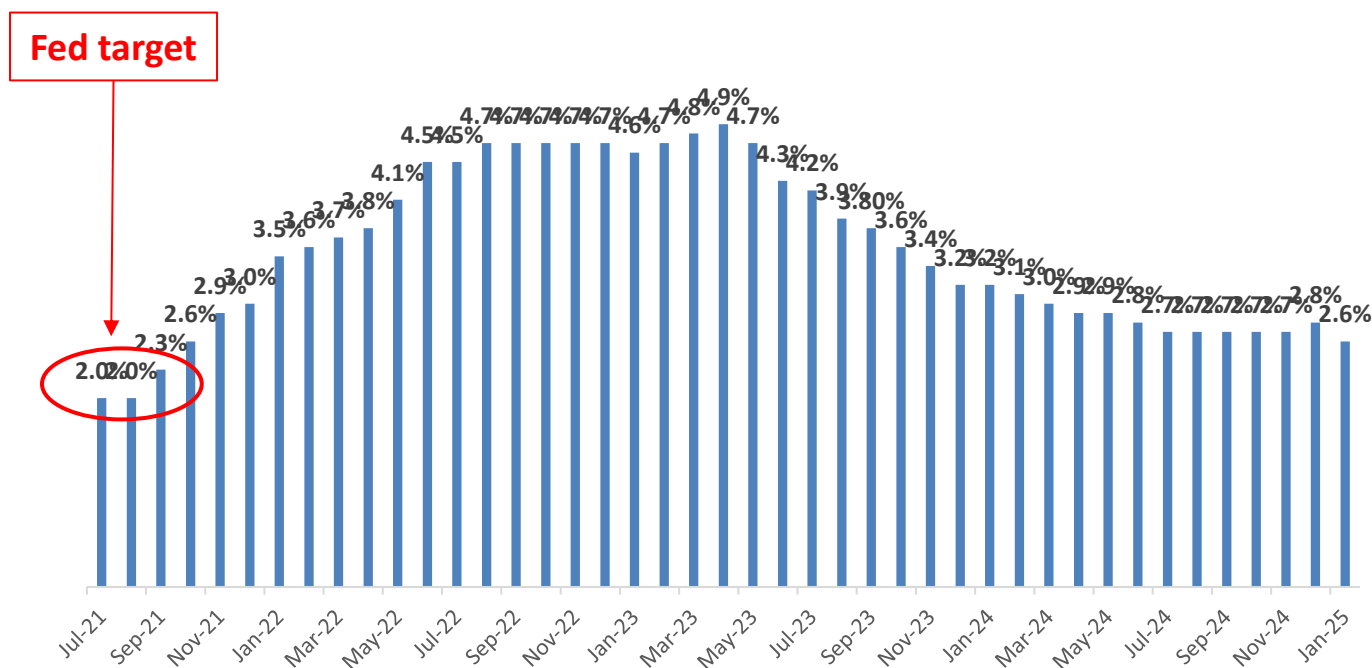
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12-month Core Inflation Is At 2.6%

The 12-month trimmed mean core PCE rate is that used for the Fed's 2% long-term inflation target benchmark. It ticked down from 2.8% to 2.6% in January.

12-Month Trimmed Mean PCE Inflation Rate

July 2021 - Jan. 2025



Current core rate is **2.6%** (12 months ending Jan. 2025)

The one-month annualized number for January was **+2.5%**

Source: Dallas Fed



10-year Breakeven Inflation Rate

This proxies market expectations of 10-year inflation, based on Treasury/TIPS spreads.

10-Year Breakeven Inflation Rate
January 2, 2003 - March 12, 2025



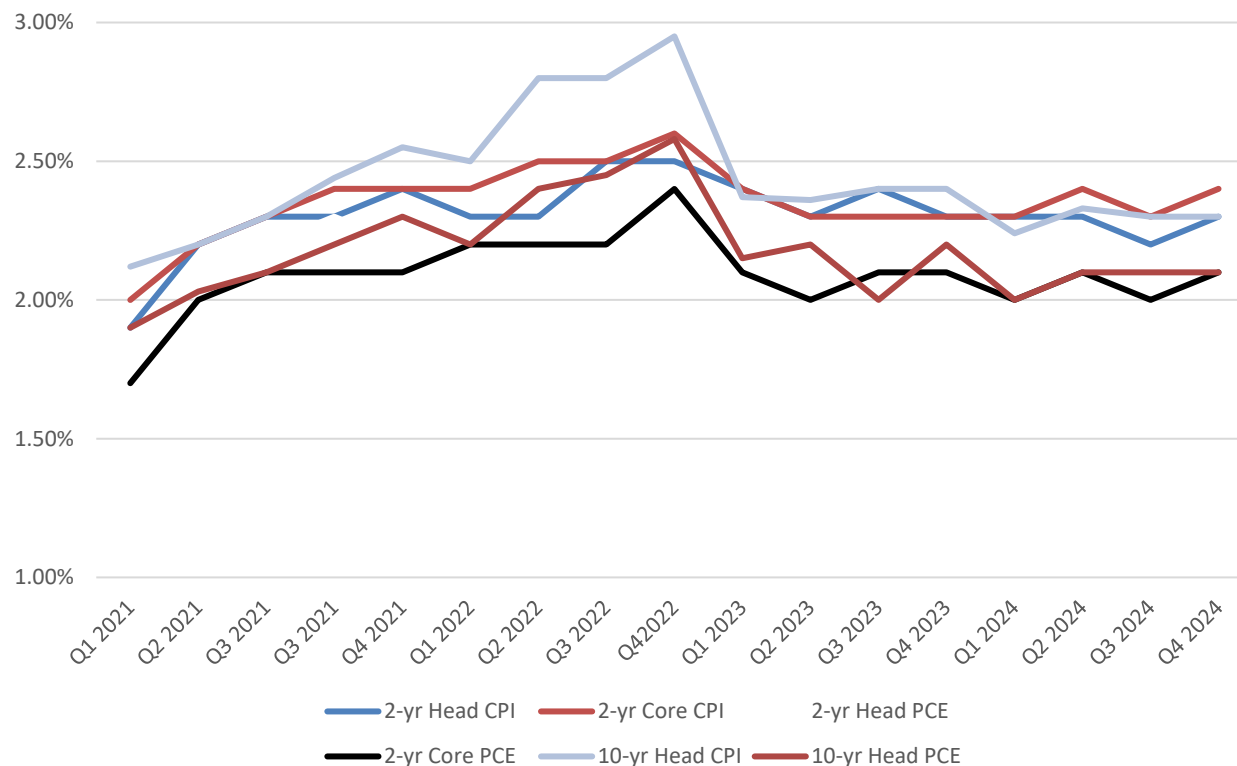
Source: St. Louis Fed



Professional Economists' Inflation Forecasts – 2 & 10 Years Out

The economists' forecasts for the inflation rate two years and 10 years from now changed little in the most recent Philly Fed quarterly survey. They expect a headline CPI rate of 2.3% two years from now and 10 years from now.

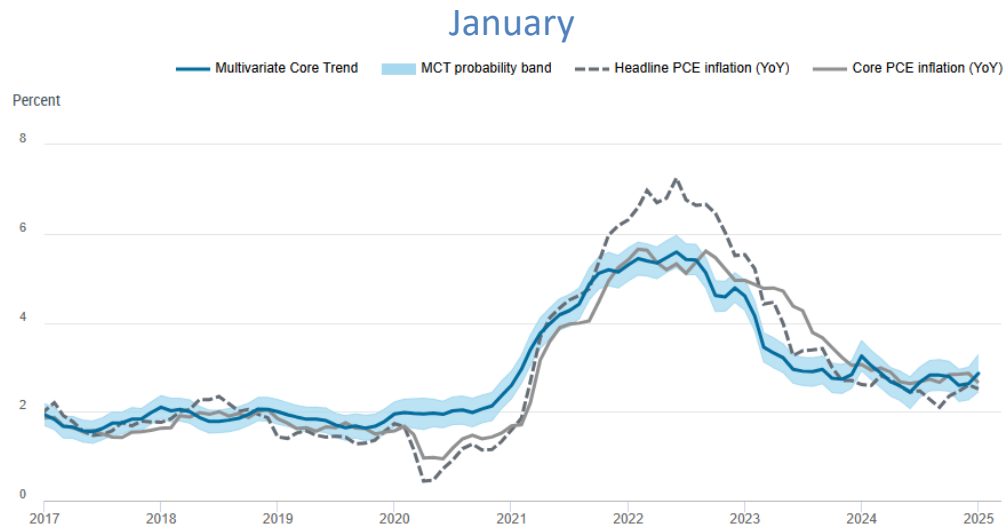
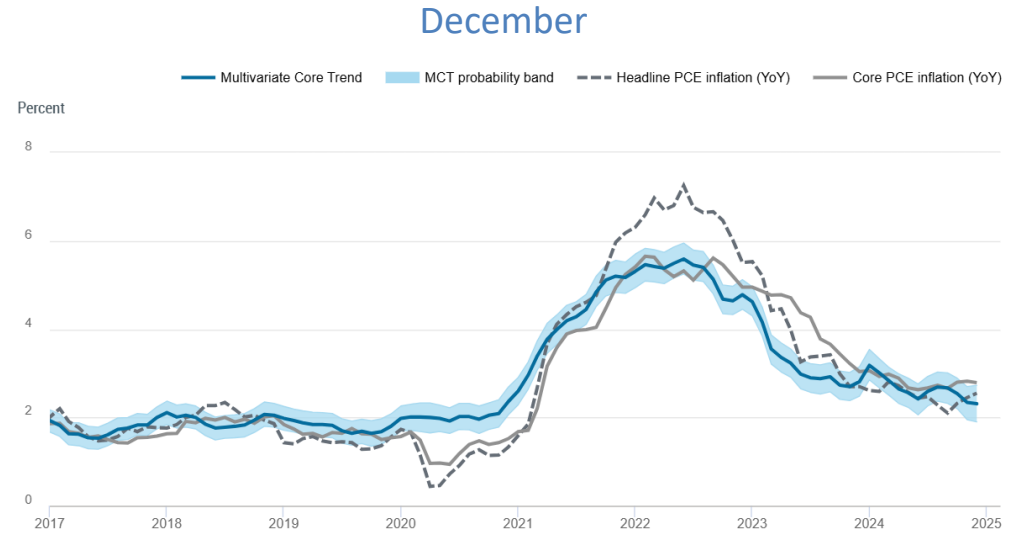
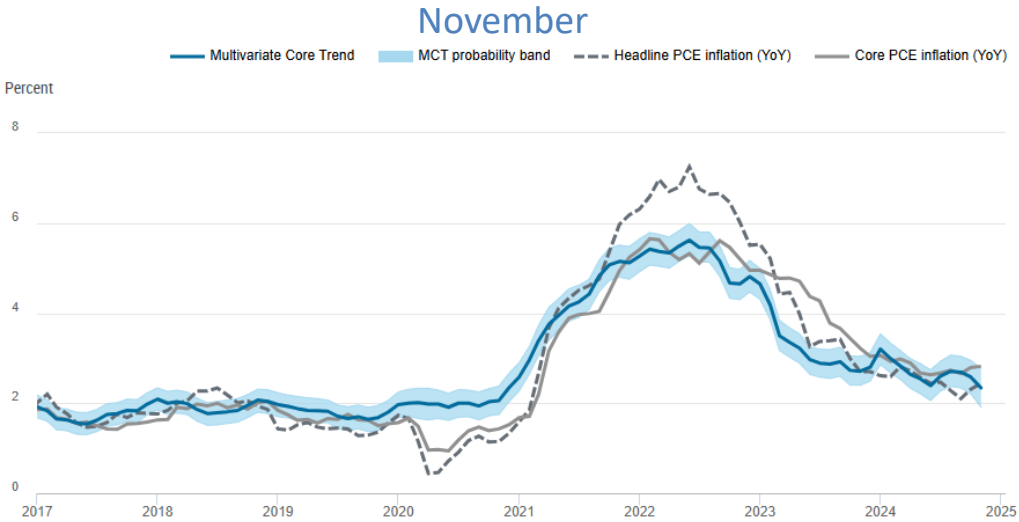
2- & 10-yr Inflation Expectations from Philly Fed Survey of Professional Forecasters
Q1 2021 - Q4 2024



Source: Philly Fed

Inflation: Multivariate Core Trend

PCE and Multivariate Core Trend Inflation Measures in mid 2024 – November through January



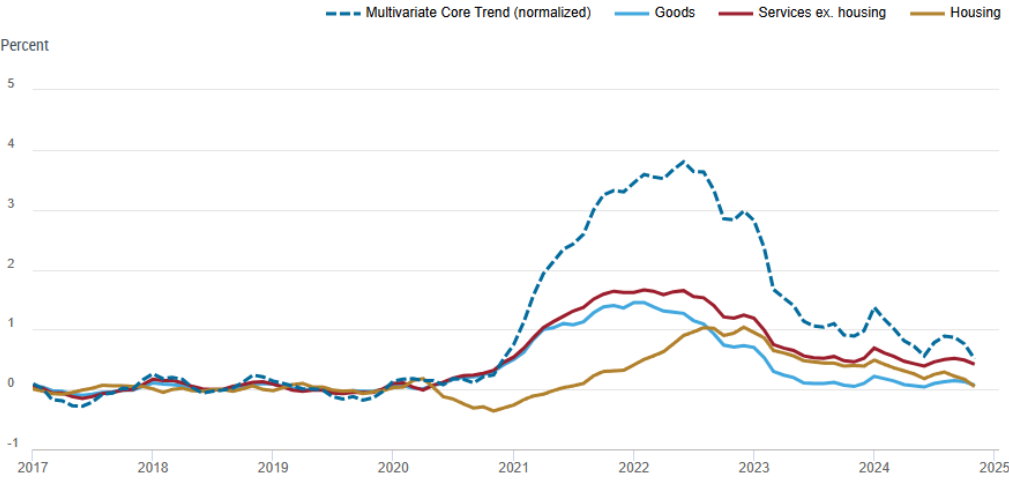
Source: BEA and New York Fed
As of March 13, 2025

Inflation: Housing and Shelter

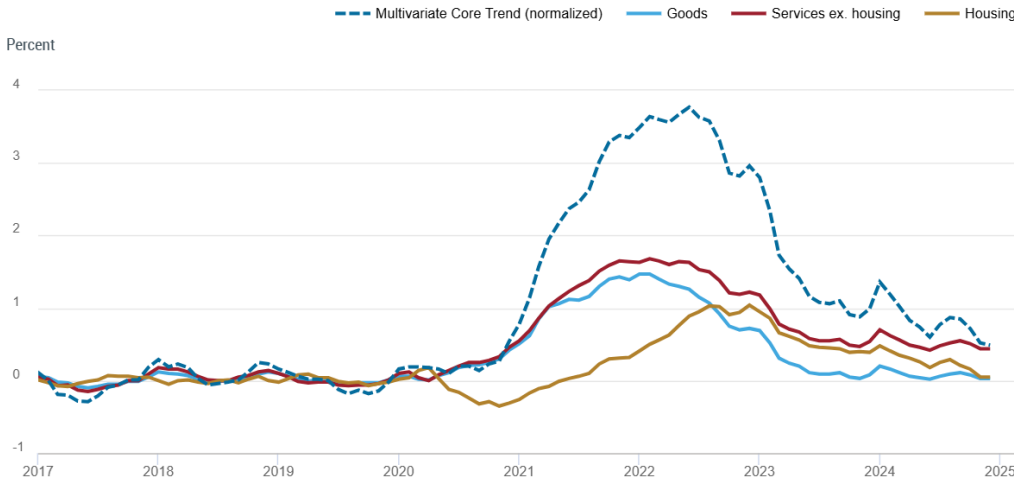


PCE and Multivariate Core Trend Inflation Measures in mid 2024 – October through December

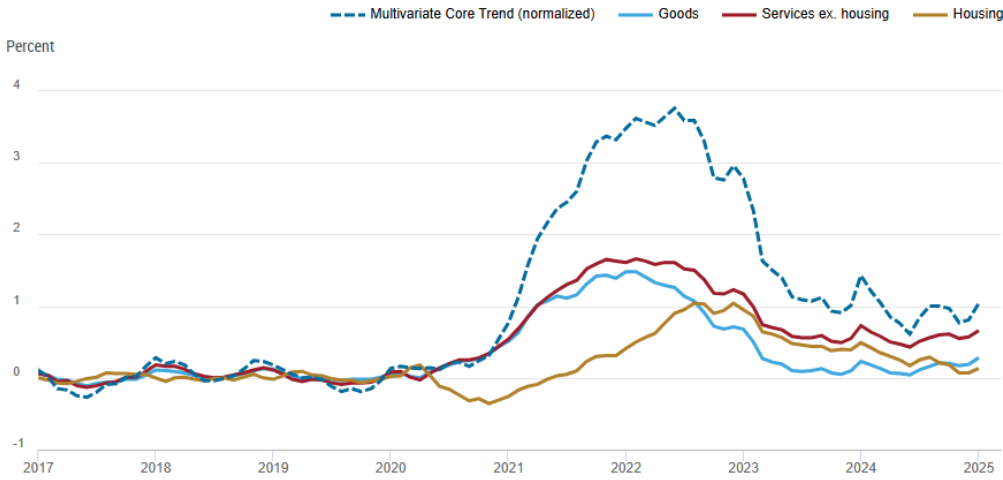
November



December



January



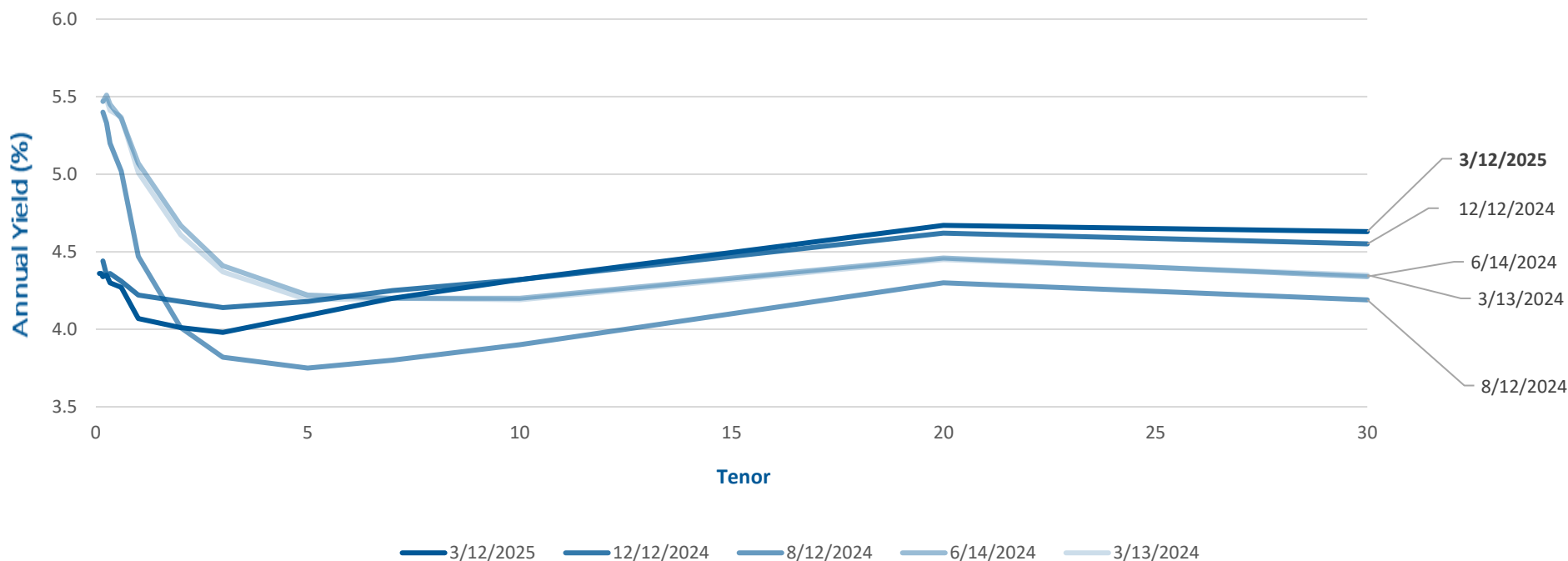
Source: BEA and New York Fed
As of March 13, 2025

Term Structure of the Yield Curve

Since the Fed steadied on its rate-reduction plan, the yield curve, a measure of the difference in yields of U.S. Government bonds of varying maturities, has narrowed. Until recently, the 2-year/10-year curve was inverted (short-term rates higher than long-term). Historically, an inverted yield curve in key government securities such as U.S. Treasuries often preceded a recession. But as of Feb. 12, the 10-year yield was 25 bps higher than the 2-year.

Treasury Yield Curve

Daily Treasury Par Yield Curve Daily Rates

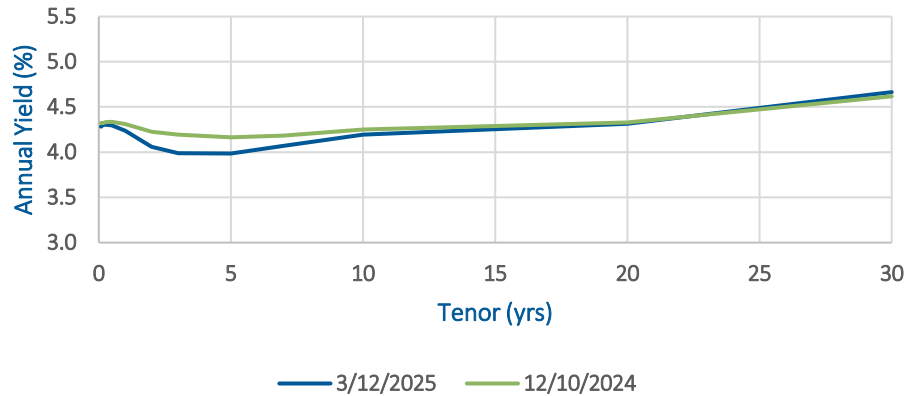


Source: U.S. Department of Treasury

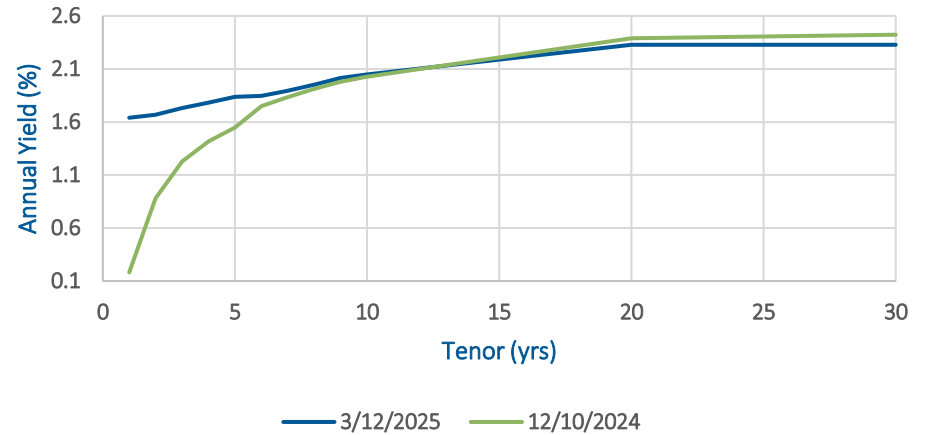
U.S. Gov't Bond Yield Curve Analysis



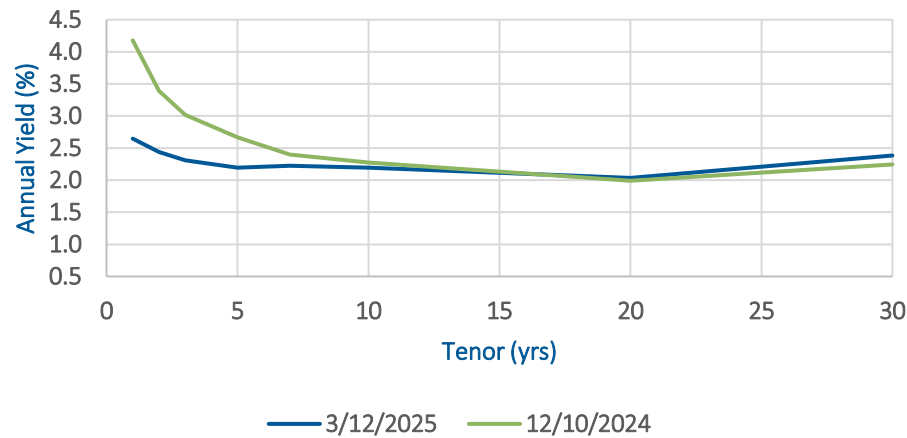
US Nominal Bond Yields
Inverted Curve Appears:
Rates Have Steepened over the Quarter



US Inflation Bond Yields
Short Rates Have Come up During the Quarter

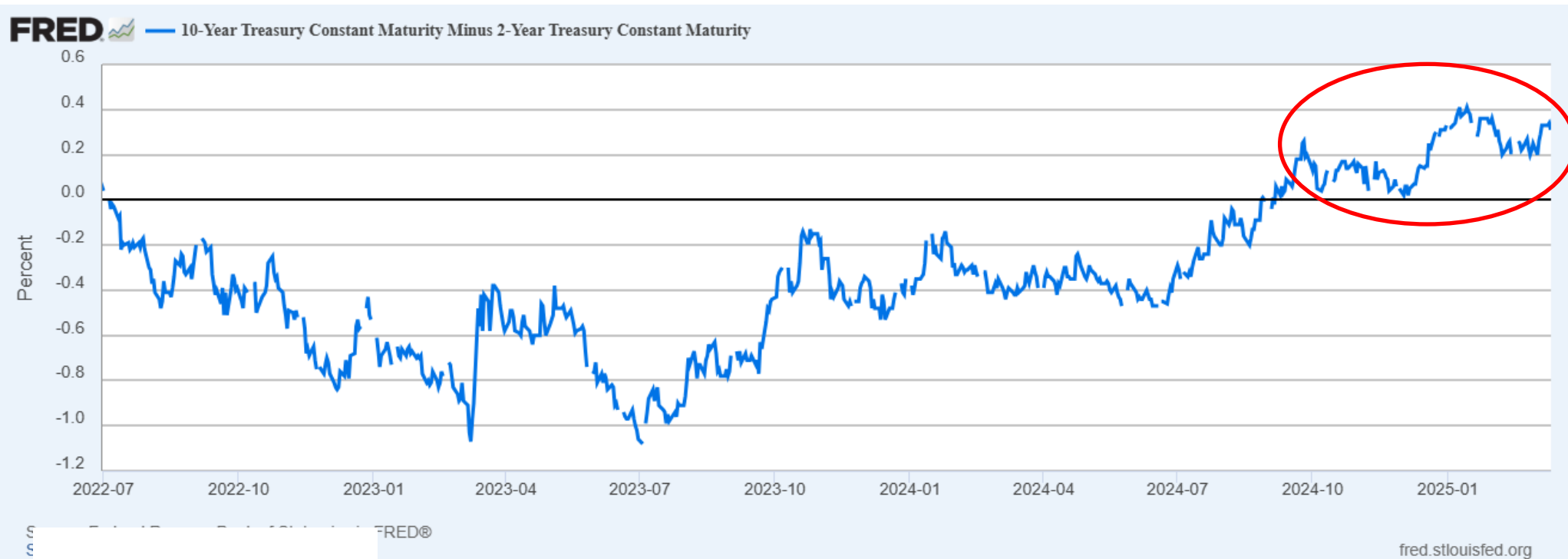


Break-Even Inflation
Inflation Expectations have Lowered over the Quarter



Source: FRED
As of February 17, 2025

The 2-/10-Year Yield Curve Inversion, Started in July 2022, Has Ended (10-year Treasury yield minus 2-year yield, June 30, 2022 – March 12, 2025)



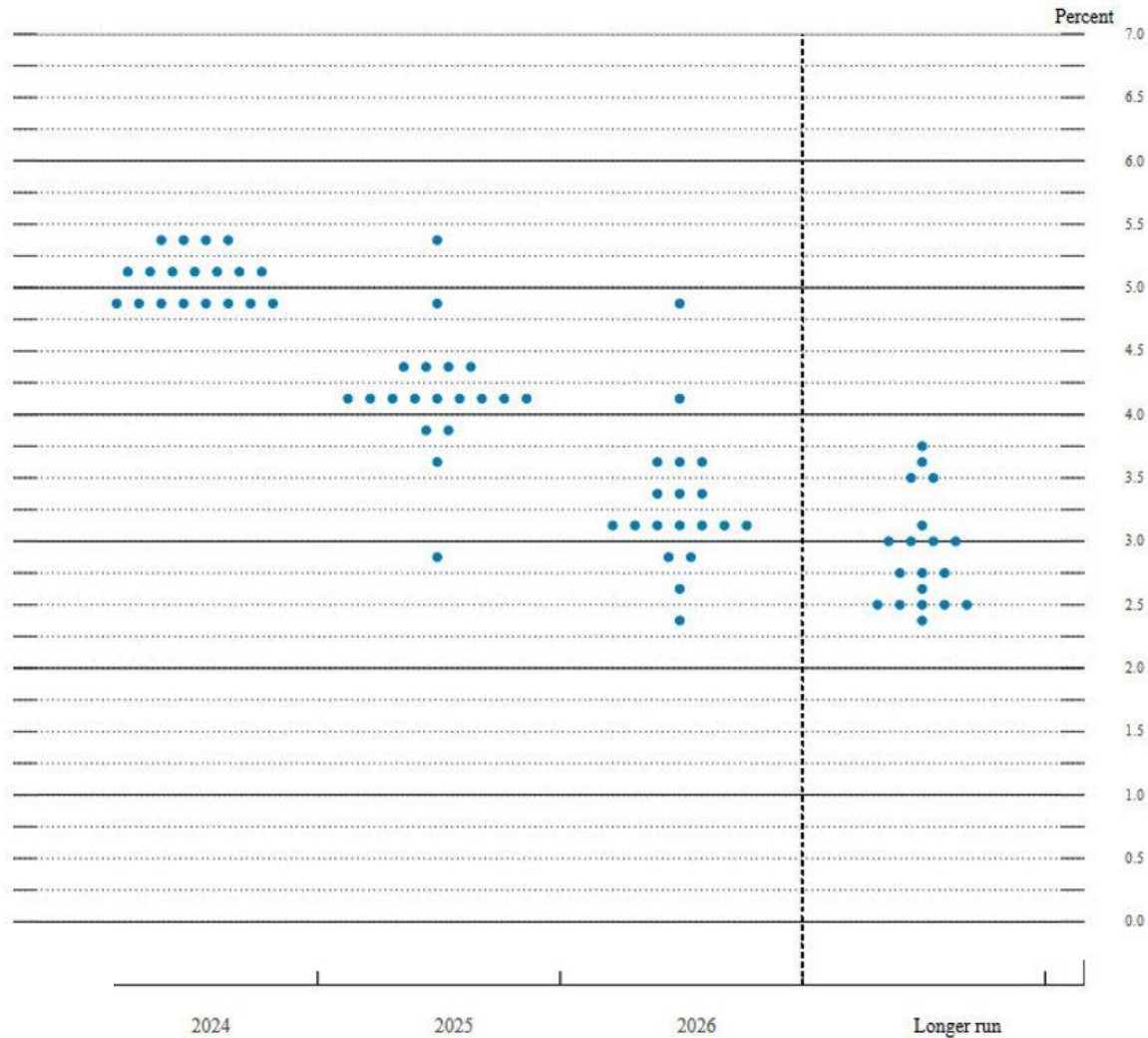


The Yield Curve Since 1976

(10-year Treasury yield minus 2-year yield, June 1, 1976 – March 12, 2025)



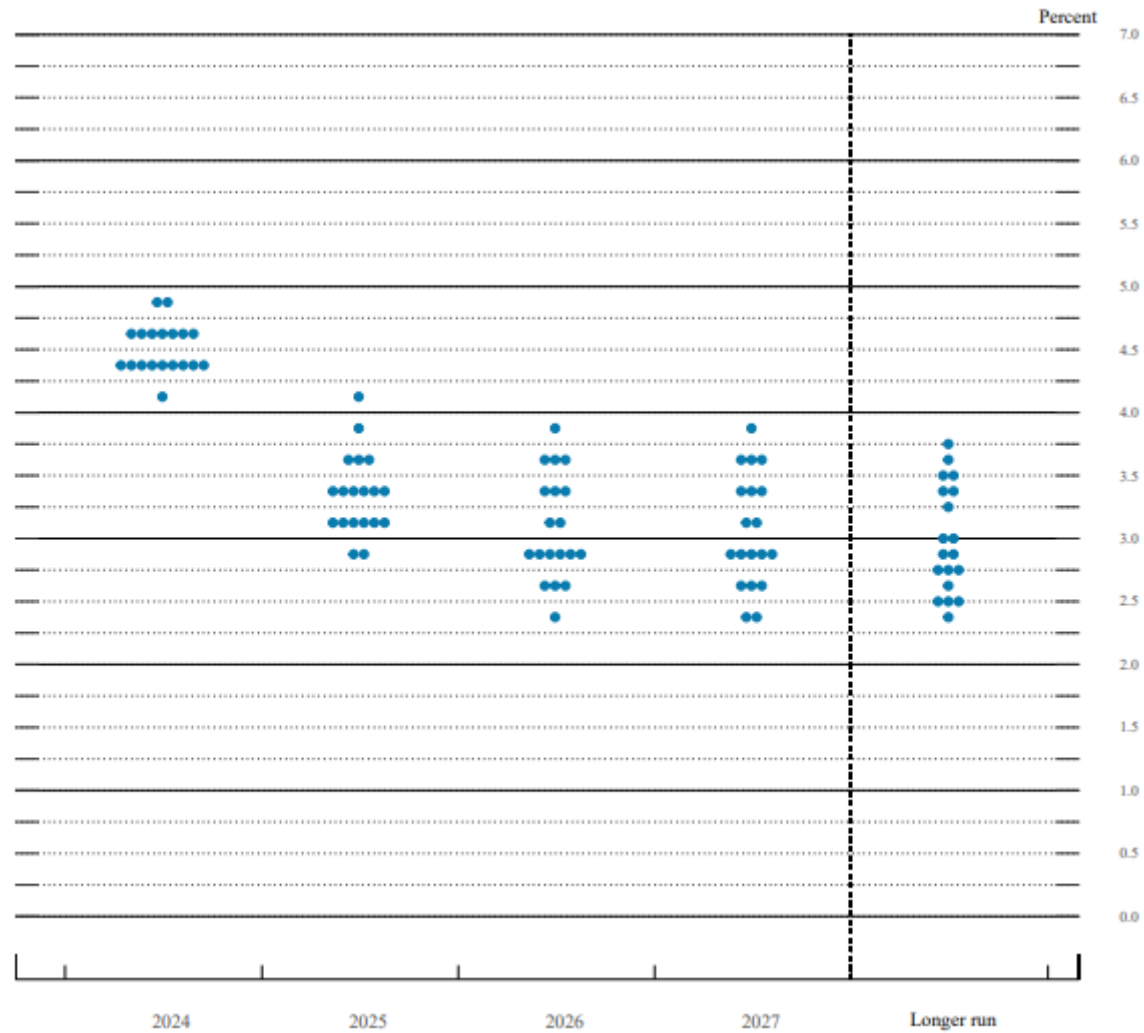
FOMC Dot Plot As of June 12, 2024



Source: Federal Reserve Board

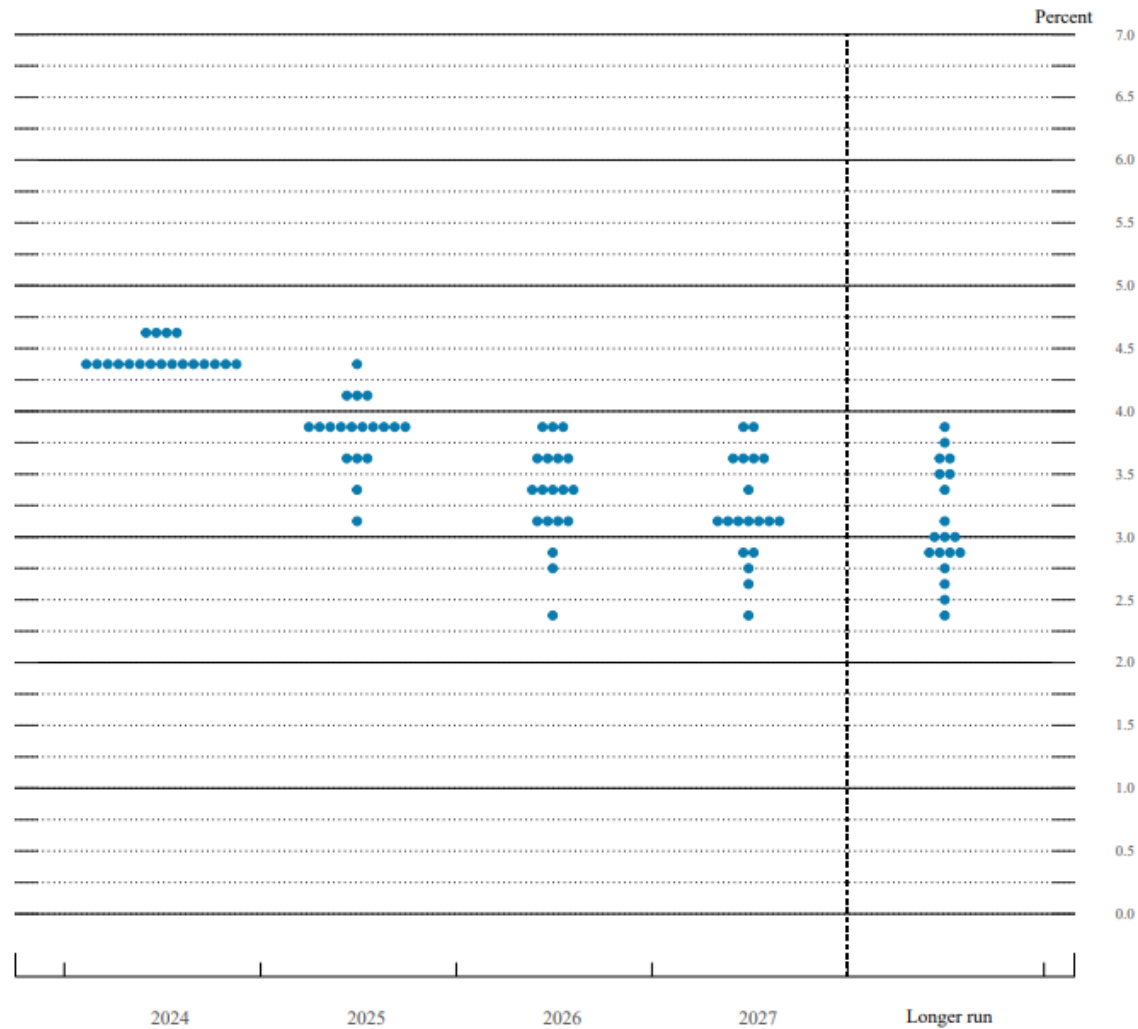


FOMC Dot Plot As of September 18, 2024



Source: Federal Reserve Board

FOMC Dot Plot As of December 18, 2024



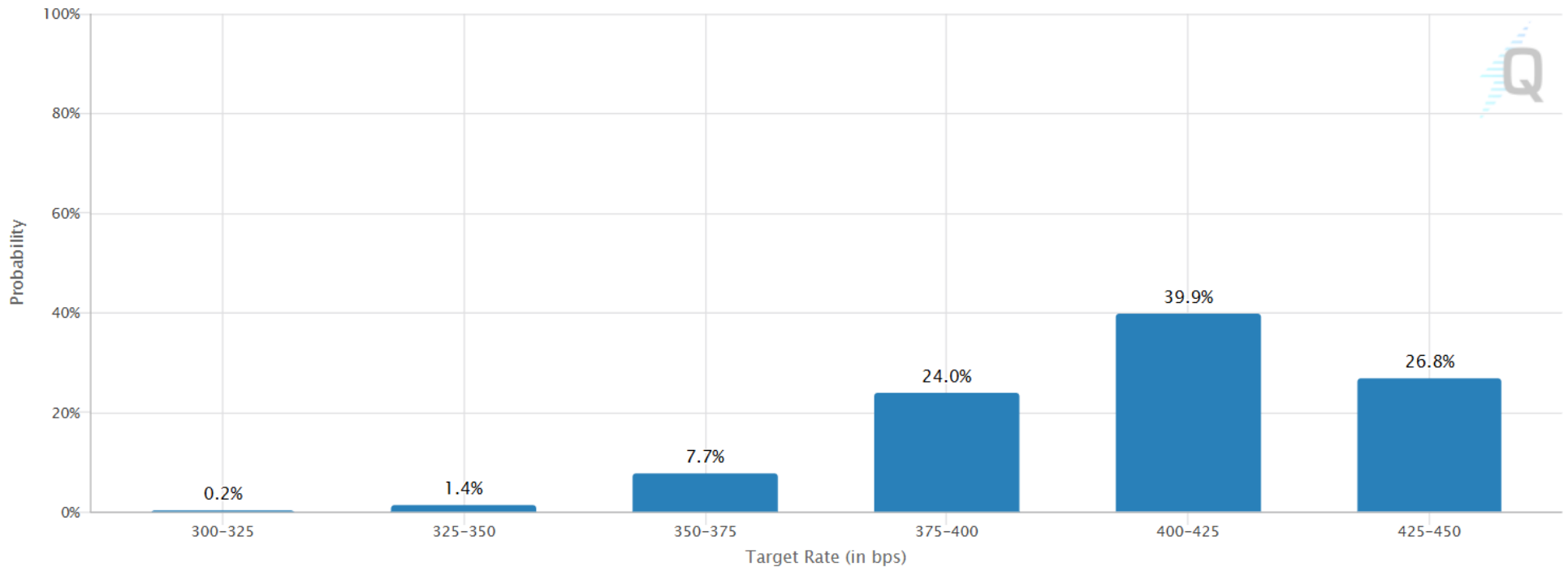
Source: Federal Reserve Board

Fed Fund Futures Implied Rates – December 2025

As of January 14, 2025

TARGET RATE PROBABILITIES FOR 10 DEC 2025 FED MEETING

Current target rate is 425–450



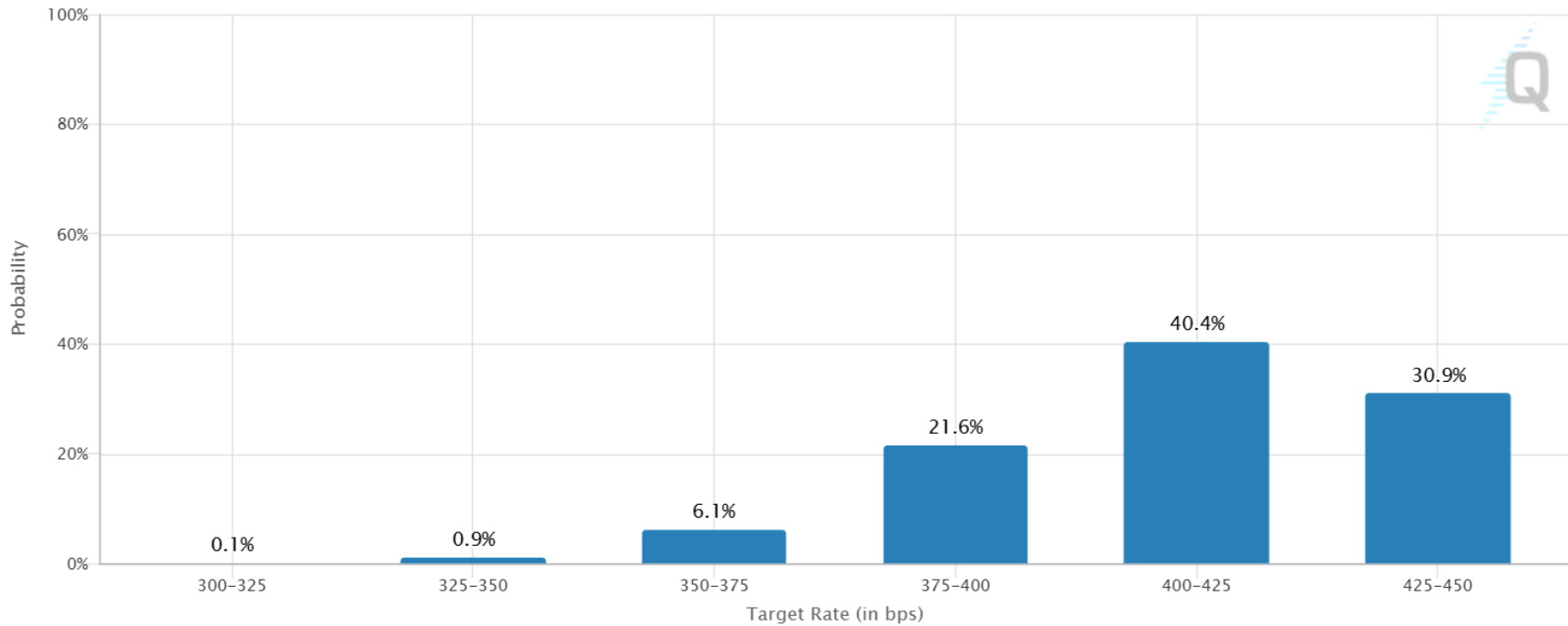
Source: CME

Fed Fund Futures Implied Rates – December 2025

As of February 12, 2025

TARGET RATE PROBABILITIES FOR 10 DEC 2025 FED MEETING

Current target rate is 425–450



Source: CME

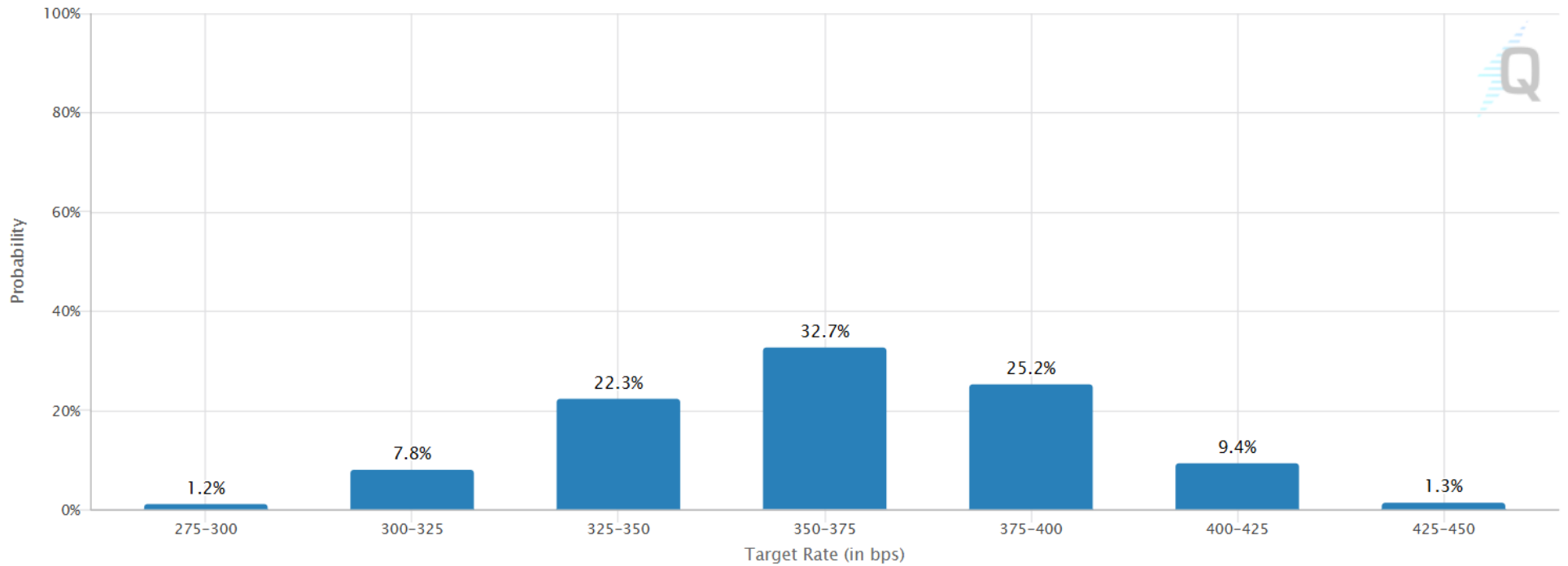


Fed Fund Futures Implied Rates – December 2025

As of March 13, 2025

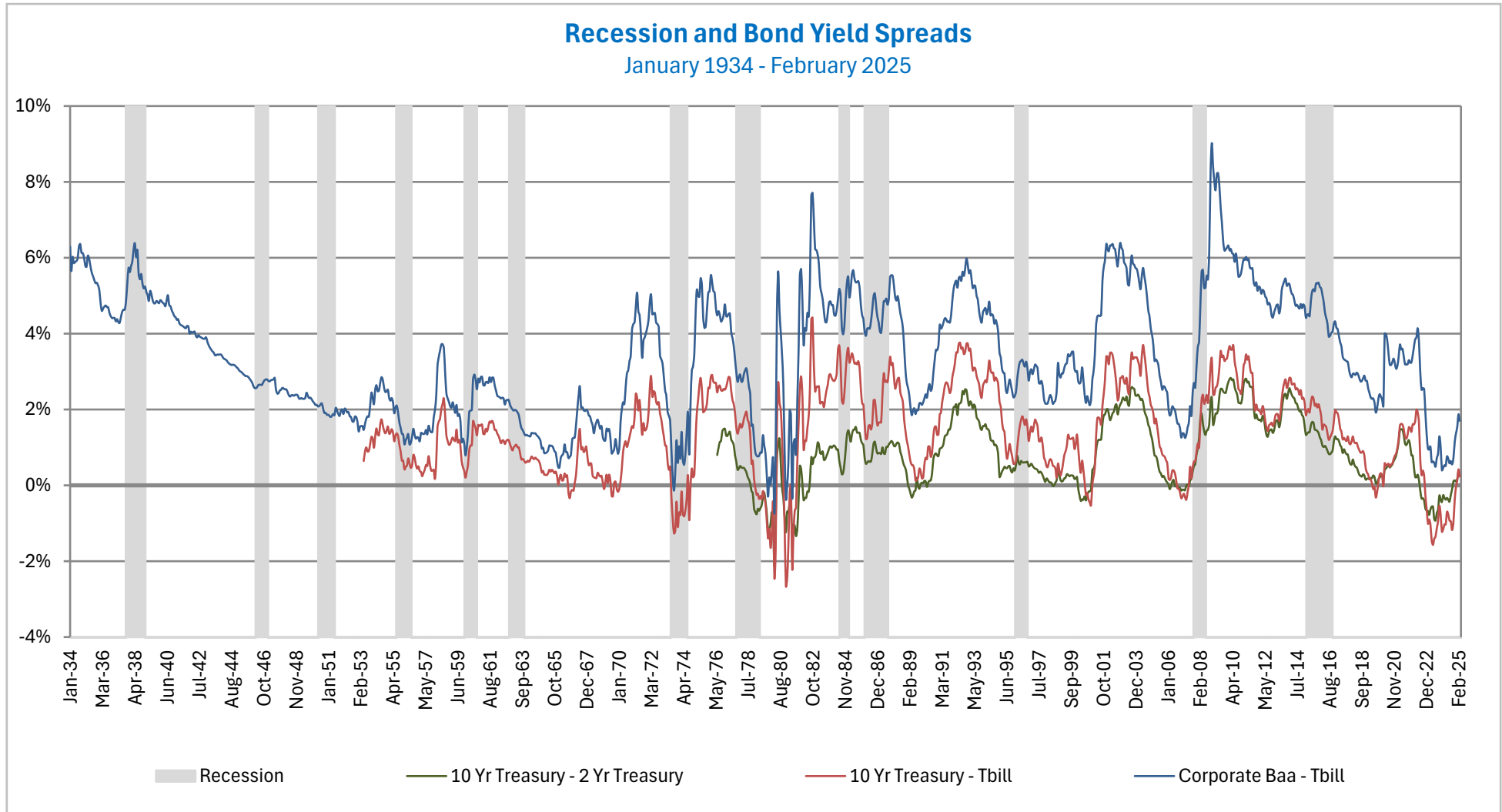
TARGET RATE PROBABILITIES FOR 10 DEC 2025 FED MEETING

Current target rate is 425–450



Source: CME

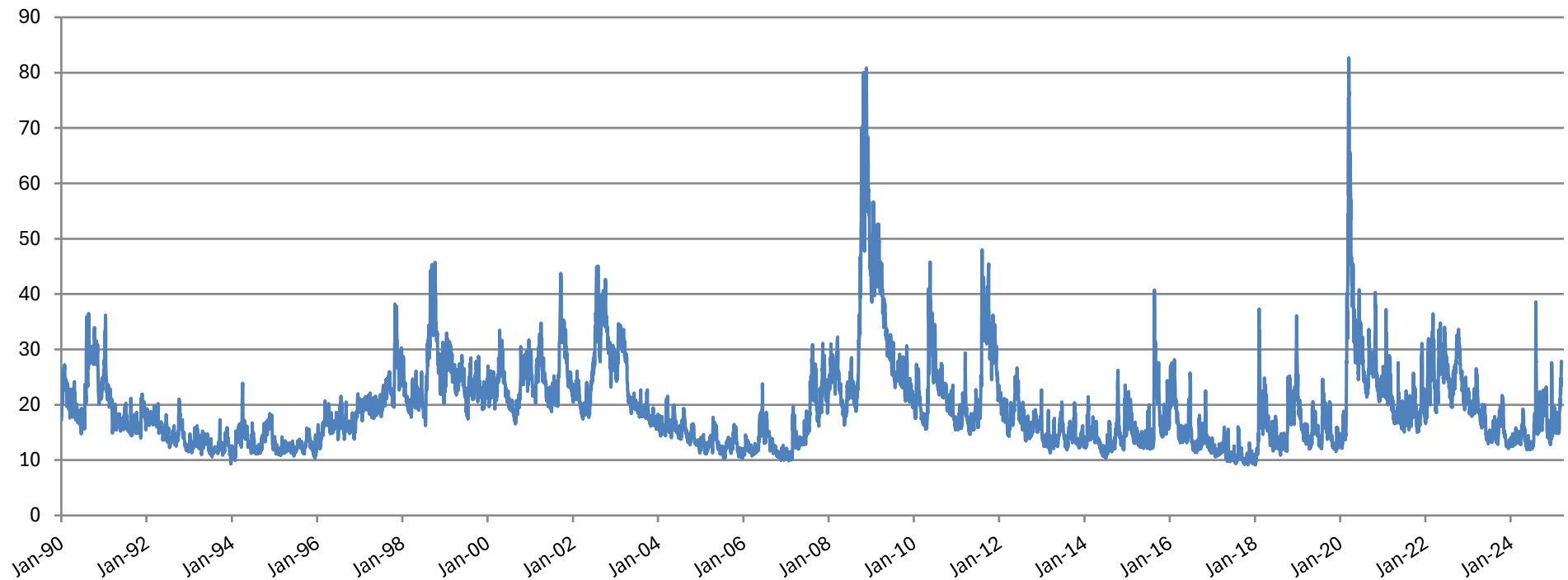
Recessions & Bond Yield Spreads



Source: FRED
As of March 13, 2025



CBOE VIX January 2, 1990 - March 12, 2025

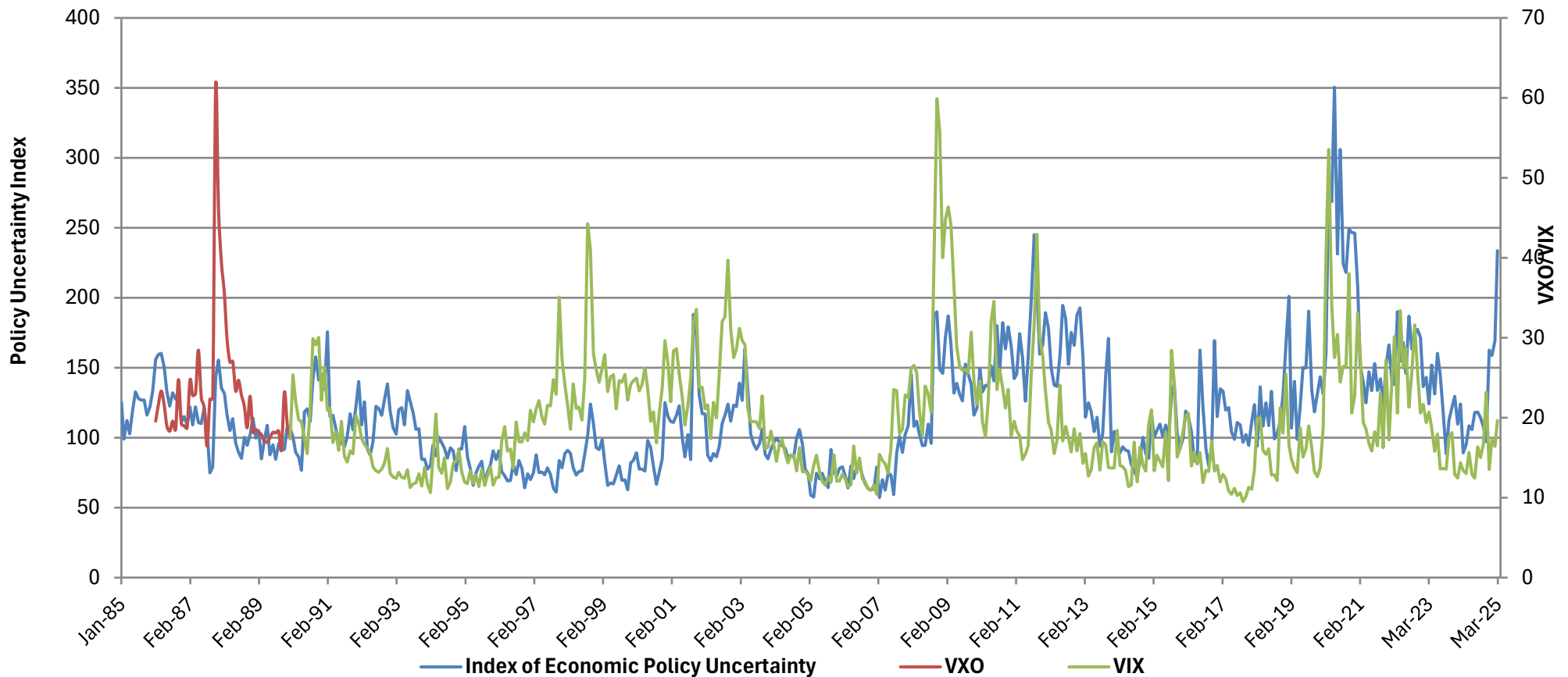


Source: <http://www.cboe.com/micro/vix/introduction.aspx>

Source: FRED
As of March 13, 2025



Policy Uncertainty and Volatility January 1985 – February 2025

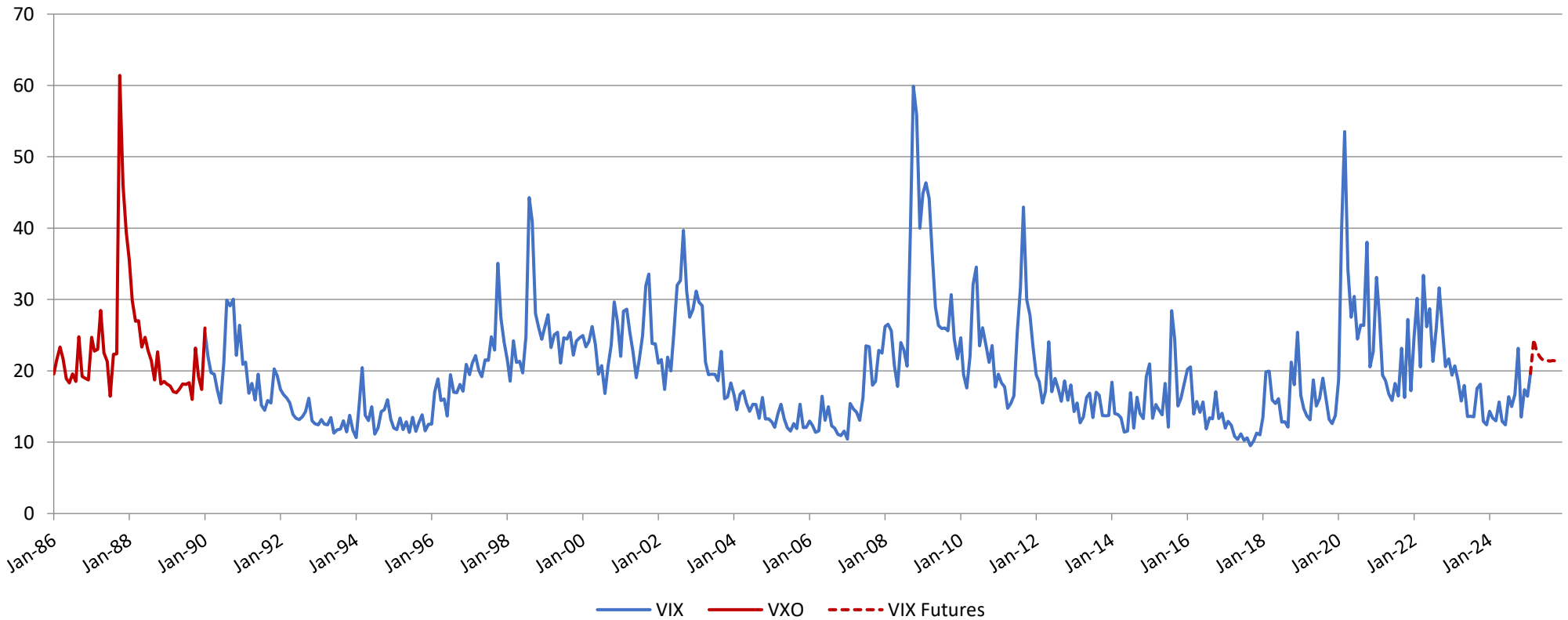


Notes: Index of Policy-Related Economic Uncertainty composed of 4 series: monthly news articles containing uncertain or uncertainty, economic or economy, and policy relevant terms (scaled by the smoothed number of articles containing 'today'); the number of tax laws expiring in coming years, and a composite of interquartile ranges for quarterly forecasts of federal, state, and local government expenditures and 1-year CPI from the Phil. Fed Survey of Forecasters. Weights: 1/2 News-based, 1/6 tax expirations, 1/6 CPI disagreement, 1/6 expenditures disagreement after each index normalized to have a standard-deviation of 1. News query run Jun 4, 2011. Index normalized mean 100 from 1985-2009. Data at www.policyuncertainty.com

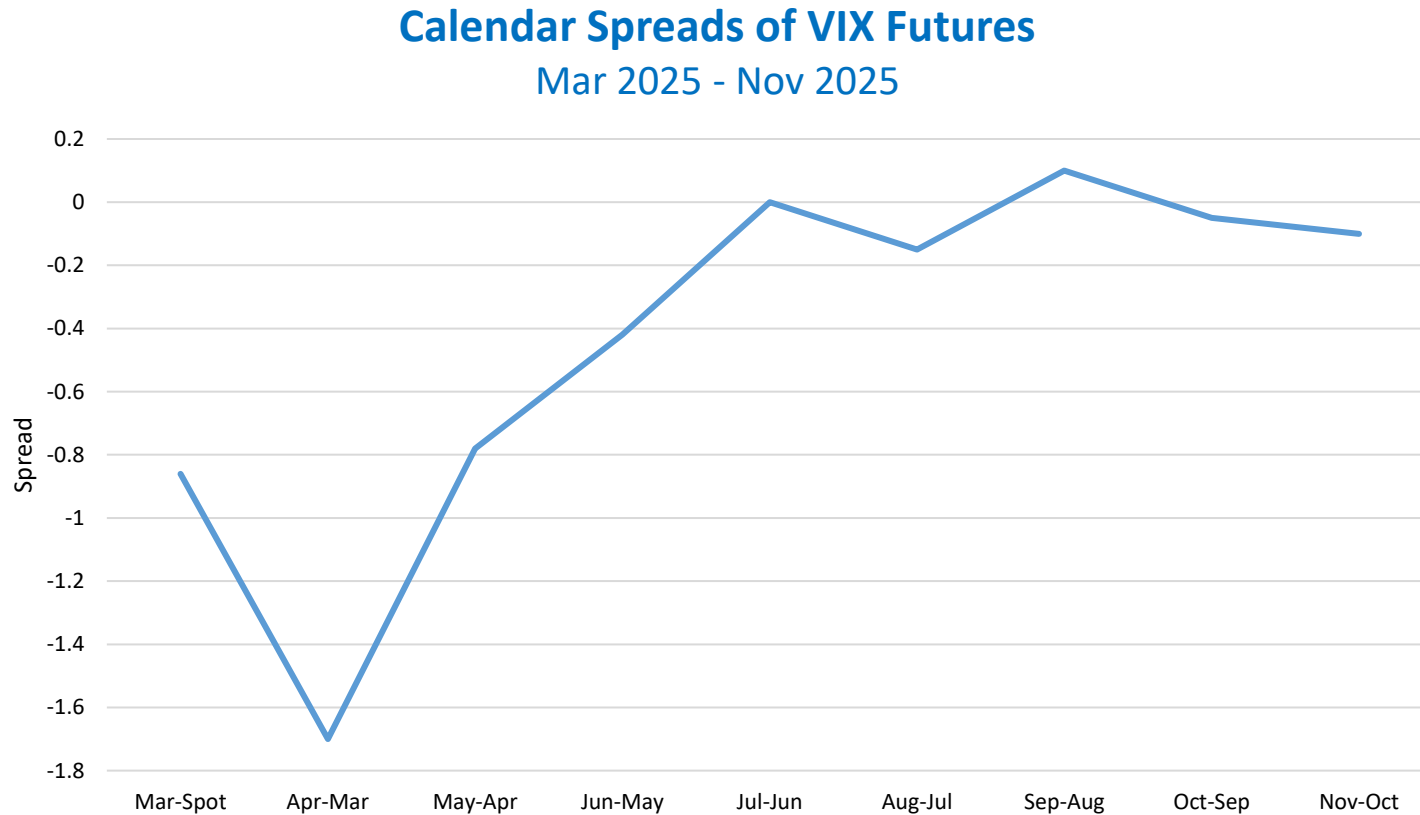
Source: FRED
As of March 4, 2025



CBOE VIX + Futures Curve Monthly January 31, 1990 - November 30, 2025



VIX futures represent the current futures level for the next 11 months. Source: Bloomberg.



VIX spreads measures the price difference between front month future and the prior month, i.e. “Mar-Spot” is the difference of the spot price and the March futures contract, “Apr-Mar” measures the difference between the April and March futures contracts. Source Bloomberg.

Econ Recession Probability Dashboard

	Indicators	Latest Date when Indicator is Updated	Latest Date to which Indicator is Updated	Latest Date Forefront Made Updates	1-Month	pseudo R-Square	1-Quarter	pseudo R-Square	2-Quarter	pseudo R-Square	3-Quarter	pseudo R-Square	1-Year	pseudo R-Square
Overall Leading	Overall Macro Leading Indicators	3/13/2025	1/31/2025	3/13/2025	0.95%	62.22%	4.64%	56.13%	9.86%	54.79%	24.07%	57.11%	42.74%	54.70%
Macro Leading Indicators	Conference Board US Leading Index Ten Economic Indicators YoY	2/28/2025	1/31/2025	3/13/2025	14.68%	47.73%	22.67%	44.49%	33.31%	39.43%	41.65%	35.91%	48.09%	32.02%
	OECD Composite Leading Indicator	3/10/2025	2/28/2025	3/13/2025	1.64%	40.75%	3.28%	34.08%	7.15%	24.14%	12.37%	15.46%	18.04%	9.12%
	Conference Board Leading Credit Index	2/28/2025	1/31/2025	3/13/2025	1.10%	55.61%	0.89%	54.54%	0.65%	53.40%	1.81%	46.55%	4.17%	38.40%
	Average Weekly Hours Worked, Manufacturing	2/28/2025	2/28/2025	3/13/2025	5.29%	13.73%	7.49%	9.33%	11.11%	8.33%	14.96%	7.40%	18.86%	6.49%
	3-Month % Change of Average Weekly Initial Claims for Unemployment Insurance	2/28/2025	2/26/2025	3/13/2025	1.39%	28.08%	1.82%	27.44%	2.78%	25.52%	5.28%	20.95%	9.85%	14.70%
	3-Month % Change of Manufacturers' New Orders, Consumer Goods and Materials	2/28/2025	1/31/2025	3/13/2025	6.42%	26.46%	9.06%	24.87%	13.30%	19.58%	16.71%	19.89%	23.50%	14.08%
	3-Month % Change of ISM New Order Index	2/28/2025	2/28/2025	3/13/2025	14.26%	0.51%	16.70%	0.68%	20.43%	0.90%	24.39%	1.55%	27.23%	0.82%
	3-Month % Change of Manufacturers' New Orders, Non-Defense Capital Goods ex Aircraft	2/28/2025	1/31/2025	3/13/2025	9.08%	13.94%	11.75%	11.94%	15.14%	10.46%	19.42%	8.97%	23.73%	5.01%
	3-Month % Change of Building Permits, New Private Housing Units	2/28/2025	1/31/2025	3/13/2025	9.63%	6.03%	10.52%	8.63%	12.33%	10.98%	15.12%	11.06%	19.04%	9.04%
	Interest Spread, US Treasury 10-Yr Yield minus Federal Fund Rate	2/28/2025	2/28/2025	3/13/2025	16.39%	2.73%	20.16%	5.94%	26.13%	10.98%	34.14%	17.47%	42.44%	21.58%
	Chicago Fed National Financial Conditions Index	3/7/2025	2/28/2025	3/13/2025	2.99%	33.70%	3.42%	34.25%	4.07%	35.01%	4.91%	34.41%	5.97%	32.82%
	US ISM Manufacturing, New Orders - Inventories	2/28/2025	1/31/2025	3/13/2025	7.43%	6.27%	8.80%	7.82%	11.55%	9.14%	14.31%	9.76%	18.82%	8.97%
	3-Month % Change in US Unemployment Claims	3/13/2025	3/14/2025	3/13/2025	7.38%	30.59%	9.21%	30.15%	13.04%	27.32%	17.69%	23.80%	23.35%	16.42%
	Consumer Confidence Index	2/28/2025	2/28/2025	3/13/2025	46.83%	40.19%	50.99%	36.28%	54.66%	29.97%	57.35%	24.97%	59.03%	20.22%
	Average Consumer Expectations for Business and Economic Conditions	2/28/2025	2/28/2025	3/13/2025	32.12%	34.62%	37.93%	29.66%	44.48%	23.70%	49.36%	19.13%	51.87%	14.60%
	Atlanta Fed GDPNow GDP Forecast	3/10/2025	3/6/2025	3/13/2025	0.00%	6.05%	0.00%	2.22%	0.00%	1.24%	0.00%	0.85%	0.00%	0.82%
	3-Month % Change in University of Michigan Consumer Sentiment Index	2/28/2025	1/31/2025	3/13/2025	10.99%	1.89%	12.86%	2.05%	16.03%	1.59%	18.85%	2.57%	22.57%	1.50%
	3-Month % Change of US Consumers Goods Orders	2/28/2025	1/31/2025	3/13/2025	20.68%	15.30%	23.52%	12.91%	28.73%	13.09%	31.04%	10.67%	34.79%	9.51%
	3-Month % Change of Capital Goods Orders, Nondefense	2/28/2025	1/31/2025	3/13/2025	3.88%	15.76%	5.25%	8.36%	6.80%	8.77%	8.82%	7.20%	12.17%	5.92%
	Sentix Economic Indices Global Aggregate Expectations	2/28/2025	2/28/2025	3/13/2025	1.86%	41.67%	2.06%	35.60%	2.93%	32.99%	6.71%	27.34%	9.23%	23.55%
	Auto Inventory/Sales Ratio	2/28/2025	1/31/2025	3/13/2025	0.98%	14.24%	1.92%	9.01%	2.55%	6.79%	3.36%	5.78%	4.39%	4.90%
	ASA Staffing Index	2/28/2025	2/24/2025	3/13/2025	20.38%	16.71%	22.24%	14.76%	22.55%	8.15%	23.76%	4.62%	26.12%	3.51%
	US Crude Oil WTI Cushing OK Spot	2/28/2025	3/10/2025	3/13/2025	11.22%	0.71%	13.04%	0.50%	15.68%	0.36%	18.24%	0.23%	20.64%	0.13%
	Federal Reserve Bank of New York Global Supply Chain Pressure Index	2/5/2025	2/28/2025	3/13/2025	8.98%	0.85%	10.07%	0.92%	11.68%	1.49%	14.60%	1.71%	17.72%	2.12%
Federal Reserve Bank of Philadelphia State Coincident Index	1/31/2025	12/31/2024	3/13/2025	2.18%	79.75%	8.00%	68.12%	17.21%	53.26%	24.59%	44.09%	30.69%	35.80%	
Overall Coincident	Overall Macro Coincident Indicators	3/13/2025	1/31/2025	3/13/2025	0.00%	86.60%	0.01%	69.59%	0.01%	67.43%	0.01%	65.31%	0.04%	58.74%
Macro Coincident Indicators	US Conference Board Coincident Indicator YoY	2/28/2025	1/31/2025	3/13/2025	8.16%	29.48%	11.77%	23.34%	16.66%	16.94%	21.27%	13.54%	25.74%	10.43%
	3-Month % Change of Payroll Employment	3/7/2025	2/28/2025	3/13/2025	5.07%	19.13%	8.56%	16.85%	13.12%	14.08%	18.48%	12.61%	23.64%	10.07%
	3-Month % Change of Personal Income Less Transfers	2/28/2025	1/31/2025	3/13/2025	18.14%	21.95%	21.53%	17.16%	26.38%	13.16%	30.77%	11.65%	34.71%	10.07%
	3-Month % Change of Industrial Production	2/28/2025	1/31/2025	3/13/2025	0.64%	28.00%	2.17%	22.61%	4.15%	17.24%	7.59%	11.70%	13.61%	8.67%
	3-Month % Change of Manufacturing and Trade Sales	2/28/2025	1/31/2025	3/13/2025	3.08%	36.16%	6.01%	30.97%	8.66%	24.21%	12.05%	23.26%	19.20%	17.27%
	Chicago Fed National Activity Index	2/28/2025	1/31/2025	3/13/2025	4.00%	52.27%	8.25%	41.31%	12.97%	34.20%	17.79%	28.99%	23.79%	20.03%
	Philly Fed ADS	3/7/2025	3/1/2025	3/13/2025	0.16%	60.32%	3.43%	55.81%	6.98%	48.36%	11.24%	41.80%	18.83%	31.53%
	Bloomberg United States Financial Conditions Index	3/10/2025	3/7/2025	3/13/2025	3.10%	33.72%	3.56%	34.27%	4.26%	35.02%	5.15%	34.42%	6.30%	32.83%
	Bloomberg Euro-Zone Financial Conditions Index	2/28/2025	2/28/2025	3/13/2025	0.22%	38.57%	0.32%	33.81%	0.66%	26.54%	1.75%	19.56%	3.56%	14.42%
	3-Month % Change of Real M2	2/28/2025	1/31/2025	3/13/2025	13.52%	0.21%	15.88%	0.71%	19.43%	1.06%	23.03%	1.92%	26.71%	2.42%
Overall Lagging	Overall Macro Lagging Indicators	3/13/2025	1/31/2025	3/13/2025	41.54%	22.69%	46.45%	23.89%	57.16%	26.46%	65.78%	29.76%	68.35%	32.64%
Macro Lagging Indicators	Average Duration of Unemployment	2/28/2025	2/28/2025	3/13/2025	5.10%	9.49%	4.97%	10.69%	4.46%	12.60%	3.87%	14.43%	3.37%	15.91%
	Inventory to Sales Ratio, Manufacturing and Trade	2/28/2025	1/31/2025	3/13/2025	34.33%	5.61%	35.54%	4.50%	38.08%	3.28%	39.66%	2.41%	40.44%	1.65%
	Average Prime Rate	2/28/2025	2/28/2025	3/13/2025	11.47%	2.52%	13.08%	3.50%	15.57%	4.82%	18.24%	6.06%	21.36%	6.68%
	3-Month % Change of Commercial and Industrial Loans	2/28/2025	1/31/2025	3/13/2025	13.38%	0.11%	15.67%	0.17%	19.14%	0.07%	22.58%	0.01%	25.98%	0.18%
	Consumer Installment Credit to Personal Income Ratio	2/28/2025	1/31/2025	3/13/2025	10.33%	2.04%	12.08%	1.90%	14.79%	1.76%	17.49%	1.72%	20.17%	1.79%
	Consumer Price Index for Services	2/28/2025	1/31/2025	3/13/2025	10.15%	10.25%	11.64%	11.82%	14.35%	13.33%	17.51%	13.91%	21.05%	13.48%
Market Indicators	Interest Spread, US Treasury 10-Yr Yield minus Federal Fund Rate	3/12/2025	3/12/2025	3/13/2025	15.62%	2.03%	19.03%	4.37%	24.40%	9.11%	30.80%	14.72%	37.66%	19.49%
	Interest Spread, US Treasury 10-Yr Yield minus 2-Year Yield	3/12/2025	3/12/2025	3/13/2025	11.50%	0.08%	14.91%	0.15%	20.34%	1.71%	25.89%	4.40%	31.90%	8.17%
	Interest Spread, US Treasury 10-Yr Yield minus 3-Month Yield	3/12/2025	3/12/2025	3/13/2025	6.27%	2.67%	10.40%	0.64%	17.93%	0.03%	27.00%	1.36%	36.37%	3.98%
	S&P 500 Returns	3/12/2025	3/12/2025	3/13/2025	16.30%	2.02%	21.41%	3.96%	23.55%	2.27%	27.92%	2.34%	31.59%	2.02%

Econ Recession Probability Inputs

	Indicators	Values: 2/17/2025	Values: 3/13/2025	Difference
Macro Leading Indicators	Conference Board US Leading Index Ten Economic Indicators YoY	3.0000	-2.6000	-5.60000
	OECD Composite Leading Indicator	100.7429	100.7117	-0.03120
	Conference Board Leading Credit Index	-0.7300	-0.2900	0.44000
	Average Weekly Hours Worked, Manufacturing	40.9000	40.9000	0.00000
	3-Month % Change of Average Weekly Initial Claims for Unemployment Insurance	-0.0093	-0.0868	-0.07747
	3-Month % Change of Manufacturers' New Orders, Consumer Goods and Materials	-0.0051	0.0034	0.00848
	3-Month % Change of ISM New Order Index	0.1699	-0.0357	-0.20557
	3-Month % Change of Manufacturers' New Orders, Non-Defense Capital Goods ex Aircraft	-0.0019	0.0108	0.01277
	3-Month % Change of Building Permits, New Private Housing Units	0.0385	0.0473	0.00880
	Interest Spread, US Treasury 10-Yr Yield minus Federal Fund Rate	-0.0009	0.0012	0.00210
	Chicago Fed National Financial Conditions Index	-0.6354	-0.5877	0.04771
	US ISM Manufacturing, New Orders - Inventories	9.2000	9.2000	0.00000
	3-Month % Change in US Unemployment Claims	-0.0103	0.0022	0.01253
	Consumer Confidence Index	98.4100	97.7600	-0.65000
	Average Consumer Expectations for Business and Economic Conditions	-0.4800	-1.1900	-0.71000
	Atlanta Fed GDPNow GDP Forecast	0.0234	-0.0241	-0.04748
	3-Month % Change in University of Michigan Consumer Sentiment Index	0.0085	0.0170	0.00851
	3-Month % Change of US Consumers Goods Orders	-0.0317	-0.0560	-0.02427
	3-Month % Change of Capital Goods Orders, Nondefense	-0.0820	0.0333	0.11528
	Sentix Economic Indices Global Aggregate Expectations	6.7299	9.1165	2.38660
Auto Inventory/Sales Ratio	1.2880	1.3970	0.10900	
ASA Staffing Index	82.1800	82.6800	0.50000	
US Crude Oil WTI Cushing OK Spot	72.7300	66.3100	-6.42000	
Federal Reserve Bank of New York Global Supply Chain Pressure Index	-0.3100	-0.0717	0.23828	
Federal Reserve Bank of Philadelphia State Coincident Index	37.0000	37.0000	0.00000	
Macro Coincident Indicators	US Conference Board Coincident Indicator YoY	1.6030	1.8720	0.26900
	3-Month % Change of Payroll Employment	0.0045	0.0038	-0.00071
	3-Month % Change of Personal Income Less Transfers	0.0009	-0.0001	-0.00098
	3-Month % Change of Industrial Production	0.0136	0.0136	0.00000
	3-Month % Change of Manufacturing and Trade Sales	0.0066	0.0093	0.00273
	Chicago Fed National Activity Index	0.1500	-0.0300	-0.18000
	Philly Fed ADS	0.1980	0.0043	-0.19370
	Bloomberg United States Financial Conditions Index	-0.6400	-0.5668	0.07317
	Bloomberg Euro-Zone Financial Conditions Index	1.7960	1.5870	-0.20900
3-Month % Change of Real M2	0.0137	0.0043	-0.00934	
Macro Lagging Indicators	Average Duration of Unemployment	23.7000	21.3000	-2.40000
	Inventory to Sales Ratio, Manufacturing and Trade	1.5280	1.5250	-0.00300
	Average Prime Rate	0.0765	0.0750	-0.00150
	3-Month % Change of Commercial and Industrial Loans	-0.0138	0.0052	0.01906
	Consumer Installment Credit to Personal Income Ratio	0.2038	0.2041	0.00030
Consumer Price Index for Services	0.0390	0.0430	0.00400	
Market Indicators	Interest Spread, US Treasury 10-Yr Yield minus Federal Fund Rate	0.1900	-0.0500	-0.24000
	Interest Spread, US Treasury 10-Yr Yield minus 2-Year Yield	0.2100	0.3100	0.10000
	Interest Spread, US Treasury 10-Yr Yield minus 3-Month Yield	0.1300	-0.0300	-0.16000
	S&P 500 Returns	0.0129	-0.0591	-0.07209

Appendix: Disclosure

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